

Item 18
Quality Contr.
Program

INVESTIGATION PROGRAM
Of Fillet Weld Size
On P-W- Industries Cable
Pan Hangers P.O. 7070-25102

FOR

WM. H. ZIMMER NUCLEAR POWER STATION PROJECT
THE CINCINNATI GAS & ELECTRIC CO.,
COLUMBUS AND SOUTHERN OHIO ELECTRIC CO., AND
THE DAYTON POWER AND LIGHT CO.

JOB NO. 7070

HENRY J. KAISER COMPANY

P. O. BOX 201
MOSCOW, OHIO 45153

FOOTHILL ELECTRIC CORPORATION

P.O. BOX 201

MOSCOW, OHIO 45153

INVESTIGATION PROGRAM

Of Fillet Weld Size

On P-W- Industries Cable

Pan Hangers P.O. 7070-25102

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FOOTHILL ELECTRIC CORPORATION
P.O. BOX 201 MOSCOW, OHIO 45153

August 22, 1980

To: R. Marshall
Project Manager
Henry J. Kaiser Co.

Subject: Deficient Welding of Cable Tray Hangers
"Investigation Program"

Objective:

Select cable pan hangers on a random basis from the total population and analyze the fillet weld size.

Special Instruction:

Welds selected will be sectioned such that weld can be polished and etched to verify the extent of fusion and size of fillet weld. The investigation will include Type A and Type B shop welds.

Type A weld on curved plate See Page #6
Type B weld on flat surface See Page #6

Result:

The random sampling of 95 weld joints has established a ninety-five (95) percent confidence level that P-W factory installed welds are acceptable.

Number of weld joints analyzed	95
Number of welds rejected due to weld size	0
Number of welds rejected due to lack of fusion	1

Sample Selection

The excess hangers in the warehouse compound consist of deleted, damaged and duplicated components. Some are identifiable by the P-W hanger number such that they can be connected to material receiving reports. Since the identifiable hangers represent a three year fabrication time frame, (1974, 1975 & 1976) the components are considered a random sampling of the total population. The sample hanger assembly may consist of more than one weld joint; therefore, there can be more than one sample per hanger assembly.

Hangers selected are as follows:

<u>Quantity</u>	<u>Description</u>
15	These hangers were rejected by QA due to welding deficiencies. (Hanger numbers 1 thru 15)
11	MR12423 Received 11-4-74
3	MR13931 Received 1-21-75
3	MR16400 Received 5-8-75
3	MR17125 Received 6-10-75
1	MR19789 Received 9-30-75
5	MR25144 Received 4-15-76
2	MR25768 Received 5-4-76
21	MR30473 Received 10-1-76

Sample Sectioning

The sixty-four hangers listed above were sectioned in such a manner that 123 different welds were analyzed (welds on curved plates and fillet weld). A total of 140 photographs were taken of the macro polished and etched surface at 3X scale. See sample deletions for additional comments.

Sample Deletion

Per instructions by S&L, (See DDC SLE-491) pages 12 & 13, the type "B" fillet weld for cable pan hanger connection details D12, D19, D20, D36, D60 and D68 is not required. Therefore, the "B" fillet weld on the following samples may be deleted.

<u>Sample #</u>	<u>Foothill Photograph #</u>
-----------------	------------------------------

KE 1	FH 1
KE 3	FH 5
KE 4	FH 7
KE 5	FH 9
KE 7	FH 13
KE 10	FH 22
KE 11	FH 24
KE 16	FH 34
KE 17	FH 36
KE 18	FH 38
KE 20	FH 42
KE 23	FH 52
KE 26	FH 58
KE 28	FH 61
KE 34	FH 77
KE 35	FH 79
KE 36	FH 81
KE 37	FH 83
KE 38	FH 85
KE 39	FH 87
KE 40	FH 89
KE 41	FH 91
KE 42	FH 93
KE 43	FH 95
KE 45	FH101
KE 51	FH113
KE 58	FH127
KE 59	FH129

Number of welds analyzed	123
Number of welds listed above	<u>28</u>
Resulted number of welds submitted in this report	95

Description of Results

A. Fillet size

# of weld legs greater than 1/8	169
# of weld legs equal to 1/8	10
# of weld legs less than 1/8	13

Twelve (12) welds less than 1/8"

Photographs: FH2, FH21, FH27, FH37, FH49, FH51, FH53, FH80, FH88, FH92, FH98 & FH100

Special Note: Photo #FH92 both legs less than 1/8"

Allowable effective throat thickness T must equal or exceed .088 inches.

<u>Photo</u>	<u>Effective Throat</u>	<u>% Above Requirements</u>
FH 1	.114	63.63%
FH 21	.1562	77.5 %
FH 27	.1458	65.68%
FH 37	.1666	89.31%
FH 49	.1666	89.31%
FH 51	.1562	77.5 %
FH 53	.1875	113. %
FH 80	.130	56. %
FH 88	.150	79. %
FH 92	.130	56. %
FH 98	.160	90. %
FH100	.100	22. %

All welds examined reflects effective throat thickness in excess of requirements.

B. Weld Bead Fusion

of welds reflecting lack of fusion 2

Photographs #FH62 and #FH132

<u>Item</u>	<u>Photo</u>	<u>Weld Result</u>
28B	FH 62	Reject
60B	FH132	Accept (See page 18)

Item 60B is a D3 connection which consists of 1/4 inch bent plate with P1001 Unistrut welded to plate with:

- 4 each 2 inch vertical welds
- 2 each 3.25 inch horizontal welds

One of the horizontal welds did not meet the effective throat thickness due to lack of fusion. AWS D1.1 permits a fillet weld in any single continuous weld to underrun the nominal fillet weld size required by 1/16" without correction provided that the undersize weld does not exceed 10% of the length of the weld. This amount

of undersize would have a minimum effective throat thickness (T) of .044 inches. The allowable length would be 10% of 3.25 inches or .325 inches. It was determined that the lack of fusion was .183 inches long or 5.6% of the length of the weld and had effective throat thickness of greater than .044 inches; therefore, this sample is acceptable.

One of the horizontal welds contain .183 inches of lack of fusion or 5.6% of weld. The allowable lack of fusion is 10% or .325 inches; therefore, this weld is acceptable.

Number of Samples	Number of Deficient Samples
95	1

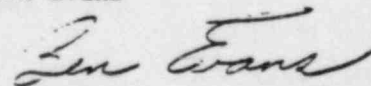
Cable Pan Hangers

<u>KE #</u>	<u>HANGER #</u>	<u>CONNECTION</u>	<u>MR</u>	<u>FOOTHILL PHOTO #</u>	<u>GLADSTONE PHOTO #</u>
1	QA Reject #3	D20		FH2	G2
2	QA Reject #6	D 8		FH3 & FH4	G3 & G4
3	QA Reject #7	D19		FH6	G6
4	QA Reject #13	D19		FH8	G8
5	QA Reject #15	D20		FH10	G10
6	QA Reject #17	D8		FH11 & FH12	G11 & G12
7	QA Reject #19	D20		FH14	G14
8	QA Reject #24	D10		FH15 - FH17	G15 - G17
9	QA Reject #29	D8		FH18 - FH21	G18 - G21
10	QA Reject #30	D20		FH23	G23
11	QA Reject #34	D20		FH25	G25
12	QA Reject #40	D8		FH26 & FH27	G26 & G27
13	QA Reject #50	D8		FH28 & FH29	G28 & G29
14	QA Reject #55	D8		FH30 & FH31	G30 & G31
15	QA Reject #56	D8		FH32 & FH33	G32 & G33
16	1H3-17	D19	13931	FH35	G35
17	7H2-18	D19	16400	FH37	G37
18	7H2-18	D19	16400	FH39	G39
19	55H4-66	55H	12423	FH40 & FH41	G40 & G41
20	8H2-66	D20	12423	FH43	G43
21	7H1-67	D19	12423	FH44 - FH47	G44 - G47
22	4H1-67	D19	12423	FH48 - FH51	G48 - G51
23	1H13-70	D20	13931	FH53	G53
24	2HV2-71	D15	17125	FH54 & FH55	G54 & G55
25	2HV2-71	D15	17125	FH56 & FH57	G56 & G57
26	7OH1-71	D20	25768	FH59	G59
27	3H2-71	D20	25768	FH60	G60
28	1H7-72	D19	17125	FH62	G62
29	19H7-74	D14 & D13A	25144	FH63 - FH66	G63 - G66
30	19H5-74	D14 & D13A	19789	FH67 - FH70	G67 & G70
31	9H1-75	D16	30473	FH71 & FH72	G71 & G72
32	1HV1-76	D15	30473	FH73 & FH74	G73 & G74
33	1HV1-76	D20	30473	FH75 & FH76	G75 & G76
34	1H16-75	D19	30473	FH78	G2
35	18HV2-70	D20	13931	FH80	G4
36	3HV2-75	D20	30473	FH82	G6
37	7H1-67	D19	12423	FH84	G8
38	5H15-1B	D20	16400	FH86	G10
39	4H1-67	D19	12423	FH88	G12
40	4H1-67	D19	12423	FH90	G14
41	4H2-67	D19	12423	FH92	G16
42	1HV1-67	D20	12423	FH94	G18
43	6HV1-69	D19	12423	FH96	G20
44	1HV1-67	D20	12423	FH97 - FH100	G21 - G24
45	3HV2-75	D20	30473	FH102	G26
46	9H2-75	D16	30473	FH103 & FH104	G27 & G28

Cable Pan Hangers

<u>KE #</u>	<u>HANGER #</u>	<u>CONNECTION</u>	<u>MR</u>	<u>FOOTHILL PHOTO #</u>	<u>GLADSTONE PHOTO #</u>
47	1HV1-76	D15	30473	FH105 & FH106	G29 & G30
48	19H3-75	D15	30473	FH107 & FH108	G31 & G32
49	1HV1-166	D9	25144	FH109 & FH110	G33 & G34
50	1HV1-166	D9	25144	FH111 & FH112	G35 & G36
51	1HV1-166	D20	25144	FH114	G38
52	1HV1-166	D14	25144	FH115 & FH116	G39 & G40
53	3H2-76	D15	30473	FH117 & FH118	G41 & G42
54	3H2-76	D3	30473	FH119 & FH120	G43 & G44
55	3H2-76	D3	30473	FH121 & FH122	G45 & G46
56	3H2-76	D15	30473	FH123 & FH124	G47 & G48
57	3H2-76	D15	30473	FH125 & FH126	G49 & G50
58	3H2-76	D20	30473	FH128	G52
59	3H2-76	D20	30473	FH130	G54
60	3H2-76	D3	30473	FH131 & FH132	G55 & G56
61	3H2-76	D3	30473	FH133 & FH134	G57 & G58
62	3H2-76	D15	30473	FH135 & FH136	G59 & G60
63	3H2-76	D15	30473	FH137 & FH138	G61 & G62
64	3H2-76	D15	30473	FH139 & FH140	G63 & G64

Ben Evans



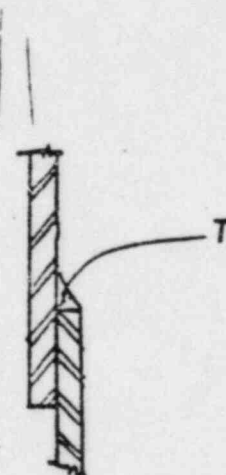
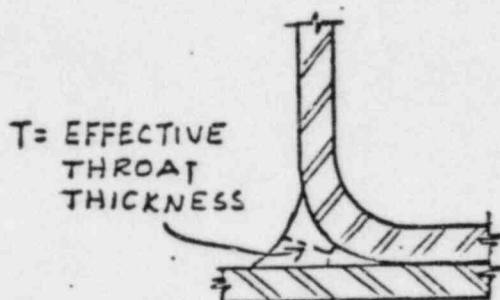
 Project Electrical Engineer
 Foothill Electric Corporation

BLE/vh

ZIMMER - 1
DEFICIENT WELDING OF CABLE TRAYS
INVESTIGATION PROGRAM

The investigation would involve the following two types of welds:

- I. Type A - Shop Weld
- II. Type B - Shop Weld



Type A: Weld on Curved Plate

Type B: Fillet Weld

Though only the Type A weld was indicated to be deficient earlier, Type B weld also was included since this type of weld is also deficient in the samples furnished to Sargent & Lundy. Since both types of welds are included in the same joint, these welds will have to be treated on the same basis. The investigation will consist of 2 steps:

Step 1 - Sampling of test specimen: The number of samples required for 95% confidence level are indicated below. The number of samples required will depend on the number of deficient samples found during the investigation. Each joint sample will count as one sample. Each joint consists of more than 2 lines of weld. (The sample could have consisted of only one line of weld if only Type A welds were to be investigated.)

<u>No. of Samples</u>	<u>No. of Deficient* Samples</u>
59	0
93	1
124	2
153	3

* A joint shall be considered deficient if the effective throat thickness T is less than 0.088".

These samples will have to be selected on a random basis from the total population and could include the structural members lying outside the plant (not used for installation) if it can be proved that they represent the total population.

Step 2 - Documentation of quality of weld: This step would include the polishing and etching of welds to verify the extent of fusion of weld material. Since weld material has to flow into a restricted area, fusion can become a problem. This step will verify the fusion so that effective throat as shown in the figure above can be utilized for the design.

This step will also involve photographing the welds to document the size of welds for permanent records.

This investigation program is based on input from M. Schuster of Q.C. and M. K. Ravindra of SAD.

Please note that the number of samples required is based on a large population and a minor revision may be possible on the basis of actual number of members required. Also please note that this program may not be possible for field welded joints and will have to be investigated separately.

CINCINNATI GAS & ELECTRIC COMPANY WM. H. ZIMMER NUCLEAR POWER STATION			DESIGN DOCUMENT CHANGE DDC No. SLE 485 Page 1 of 3	
DWG/SPEC. NO. EB-117	REV.	ITEMIZATION NO. & SYSTEM:	DDC PREPARED BY: Martin E. Schuster Jr.	DATE: Sept. 21, 1979
DWG/SPEC. NAME:	DDC/SPEC. ISSUED BY:		DWG/SPEC. REGISTER NO. SLE #	DDC REGISTER NO.

REASON FOR CHANGE

To clarify field inspection procedure and acceptance criteria for cable tray hanger welds.

DESCRIPTION OF CHANGE

The visual inspection requirements of AWS Structural Welding Code shall apply to cable tray hanger welds except as modified herein:

1. The faces of fillet welds may be slightly convex, flat or slightly concave as shown in Figure 3.6A, B, and C of A.W.S. D1.1-1975, except that there shall be no maximum limit on convexity.
2. The fillet weld size as specified in tray hanger standards shall be the minimum size. There will be no maximum limit on weld size.
3. Unequal leg fillet welds are acceptable provided they exceed the minimum specified leg size and throat size.
4. Weld spatter and slag on the end plate or Unistrut members is acceptable. Arc-strike on the end plate or Unistrut member is acceptable providing this condition does not cause loss of base metal greater than 10 mils or produce visual cracks.
5. The following standards will be adequate with a 10 mil undercut around the Unistrut member or as listed in Table - Item 7:
 STD-EB 117.11, .13 thru .16, .20, .32, .35, .37, .43, .63, .64, .66, .67, .72
 STD-EB 116.33, .40, .54, .55
6. The following standards will be adequate with a 10 mil undercut around the Unistrut member: STD-EB 117.1 thru .10, .12, .17 thru .19, .33, .36, .41, .42, .47 thru .55, .60, .68, .73.

Essential ☒
Non-Essential ☐

Reviewed by
Harold Ligh
9/21/79

APPROVAL OF CHANGE

[Signature] 9/21/79

THE CINCINNATI GAS & ELECTRIC COMPANY		DESIGN DOCUMENT CHANGE	
WM. H. ZIMMER NUCLEAR POWER STATION		DDC No. SLE-485	Page 2 of 3
DWG/SPEC. NO.: EB-117	REV.	ITEMIZATION NO. & SYSTEM:	DDC PREPARED BY: [Signature]
			DATE: 9/21/79
DWG/SPEC. NAME:	DWG/SPEC. ISSUED BY:	DWG/SPEC. REGISTER NO.	DDC REGISTER NO.

7. The following table is for allowable undercut, on Unistrut member only.
(See Item 5)

Allowable Undercut*	Type of Unistrut See Figure	Location Undercut Can Occur	No Undercut Allowed**
1/4" long by 30 mil deep	1	3 places - A, B, C	D
1/4" long by 30 mil deep	2	4 places - A, B, C, E	D
1/2" long by 30 mil deep	2	2 places - A or B or C or E	D
1/4" long by 30 mil deep	3	6 places - A, B, C, E, F, G	D
1/2" long by 30 mil deep	3	2 places - A or B or C or E or F or G	D

*Maximum at any one place anywhere along each face instead of 10 mil continuous undercut on that face.

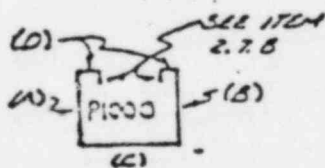


Figure 1

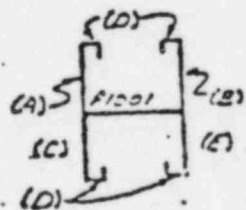


Figure 2

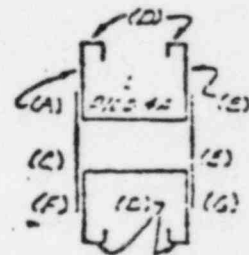


Figure 3

**10 mil undercut not allowed on side "D" when conditions in Item 7 exist.

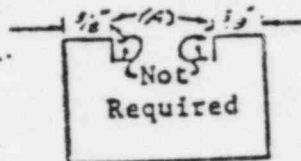
Essential ☐
Non-Essential ☐

APPROVAL OF CHANGE

S&L ENGINEERING	DATE	CG&E ENGINEERING	DATE	CG&E QUALITY ASSURANCE	DATE
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DWG/SPEC. NO.: EB-117	REV.	ITEMIZATION NO. & SYSTEM:	DDC PREPARED BY: WES	DATE: 9/21/79
DWG/SPEC. NAME:	DWG/SPEC. ISSUED BY:	DWG/SPEC. REGISTER NO.	DDC REGISTER NO.	

8. Welds beyond point "A" (See Figure 4) are not required for seismic design and therefore shall not be considered when inspecting hanger components.



Unistrut cross section typical for all Unistrut types. (Figure 4)

9. The following standards are adequate with 1/16" undercut on each side of finger providing that the total spacing between cable supports does not exceed 26 feet or 35 feet if undercut is only on 1 side. 1/16" undercut is allowed on both sides of the base at any finger: STD-EB-116.38, .39, .44, .45, .47, .48, .49, .52, .53, .56, .57 thru .60, .78 thru .81, .86 thru .93, .101 thru .104, .111
10. The following standards will be adequate with 1/16" undercut on the end plate or the bent plate.
STD-EB-117.1 thru .11, .12, .17 thru .19, .35 thru .37, .41, .42, .47 thru .55, .68, .73, .13A, .13B
11. The following standards will be adequate with a 1/16" undercut on end plate. 1/16" undercut is not allowed on side "D" for P1001, P1004A Unistrut or Side C & D for P1000 Unistrut: (Refer to Figures 1, 2, & 3 Item 7)
1/32" undercut is allowed on side D for P1001, P1004A Unistrut or side C & D for P1000 Unistrut.
STD-EB-117.13C thru .16, .20, .35, .37, .43, .67,
STD-EB-116.33, .40, .54, .55
12. The surface roughness of welds is acceptable provided the depression (depth) between ripples is not greater than 1/32" and the root of the ripple is rounded.

Essential ☐
Non-Essential ☐

APPROVAL OF CHANGE

S&L ENGINEERING

DATE

CG&E ENGINEERING

DATE

CG&E QUALITY ASSURANCE DATE

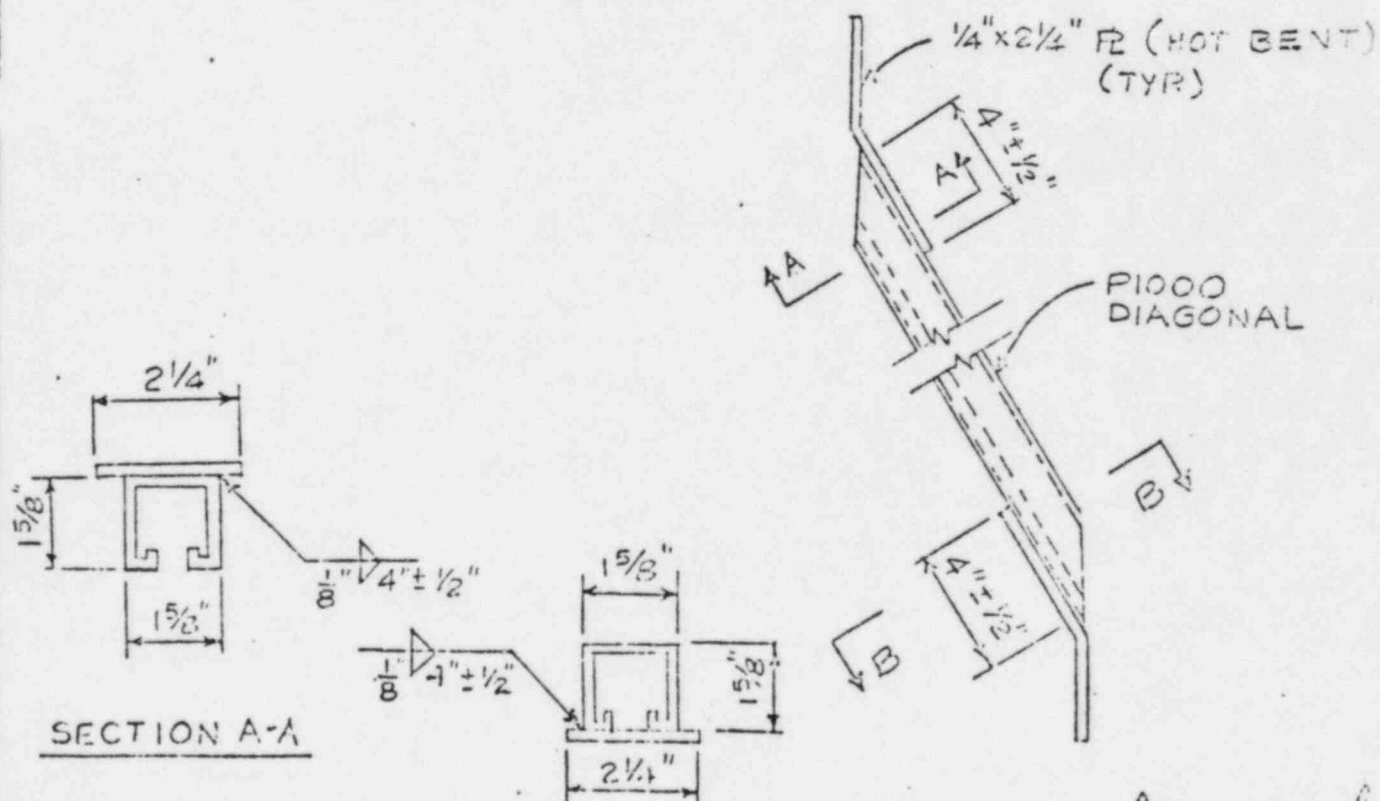
THE CINCINNATI GAS & ELECTRIC COMPANY		DESIGN DOCUMENT CHANGE	
Wm. H. ZIMMER NUCLEAR POWER STATION		DDC No. SLE-491	Page 1 of 2
DWG/SPEC. NO.:	REV.	ITEMIZATION NO. & SYSTEM:	DDC PREPARED BY:
See Page 2			P. C. Bhatt
			DATE:
			02/04/80
DWG/SPEC. NAME:	DWG/SPEC. ISSUED BY:	DWG/SPEC. REGISTER NO.	DDC REGISTER NO.
See Page 2	S&L		C6311

REASON FOR CHANGE

Cable Tray Hanger Tabulation Drawings refer to Standard Connection Details EB-117.12, 117.19, 117.20, 117.36, 117.60 & 117.68. These Standard Details show connection of hanger diagonal member to other hanger components. In many cases the 1/8" weld across the diagonal is missing and the 4" weld along the diagonal is no exactly 4" long.

DESCRIPTION OF CHANGE

Revise the connection between the diagonal and plate as shown below.



Essential ☒
Non-Essential ☐

SECTION B-B

Reviewed
J. M. P. L.

APPROVAL OF CHANGE

1/11/80 4/1/80

1/11/80 3-7-80 C. B. Bhatt

S&L ENGINEERING

DATE

CG&E ENGINEERING

DATE

CG&E QUALITY ASSURANCE

THE CINCINNATI GAS & ELECTRIC COMPANY
WM. H. ZIMMER NUCLEAR POWER STATION

DDC. No. SLE-491
Page 2 of 2

Cable Tray Hanger Tabulation Drawings

Drawing No.

E-14H	E-166H
E-15H	E-167H, Sh. 1 & 2
E-16H, Sh. 1 & 2	
E-17H, Sh. 1 thru 4	
E-18H, Sh. 1 thru 6	
E-19H, Sh. 1 thru 11	
E-20H, Sh. 1 thru 5	
E-21H, Sh. 1 thru 3	
E-22H	
E-23H, Sh 1 & 2	
E-24H	
E-25H	
E-26H	
E-27H	
E-28H	
E-29H	
E-30H	
E-31H	
E-32H	
E-65H	
E-66H — HERE	
E-67H, Sh. 1 & 2	
E-68H, Sh. 1 & 2	
E-69H, Sh. 1 thru 5	
E-70H, Sh. 1 thru 6	
E-71H, Sh. 1 thru 3	
E-72H, Sh. 1 thru 6	
E-73H	
E-74H, Sh. 1 & 2	
E-75H, Sh. 1 & 2	
E-76H	
E-77H	
E-78H	
E-79H, Sh. 1 & 2	
E-80H	
E-81H, Sh. 1 & 2	
E-82H	
E-83H	
E-87H	
E-88H	
E-102H, Sh. 1 & 2	
E-161H, Sh. 1 thru 3	
E-162H, Sh. 1 & 2	
E-163H	
E-164H	
E-165H	



GLADSTONE LABORATORIES, INC.

AREA CODE 513

921-6700

A COMPLETE NON DESTRUCTIVE TESTING METALLOGRAPHY WELDING & FABRICATION

1034 WOODROW STREET • CINCINNATI, OHIO 45204

Henry J. Kaiser Co.

REQUESTOR

P.O. Box 201

ADDRESS

Moscow, Ohio 45153

CITY AND STATE

Ben Evans

SUBMITTED BY

#553-2011 231

ANALYSIS NO. 9-692

7070-36375

PURCHASE ORDER NO.

Page 1 of 13

DATE 10/26-31/79

OBJECTIVE:

Electrical Hanger Weldments Macro Evaluation.

COMPOSITION:

HISTORY:

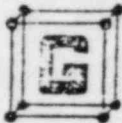
Per KE Form E-6
#1 - 19

SPECIAL INSTRUCTIONS:

Macro polish, etch & photo @ 3X sections of submitted specimens. Evaluate weld profiles per technique and format developed on Analysis 9-578 utilizing KE supplied data form. Develop method to preserve macro surface after evaluation.

RESULTS:

Scale marked 3X photographs Page 3 - 9.
Fillet cross-section evaluation data pages 10 - 13.METALLOGRAPHER: M. G. Bolinger, Jr. *M. G. Bolinger, Jr.*



1034 WOODROW STREET • CINCINNATI, OHIO 45204

REQUESTOR
Henry J. Kaiser Co.
ADDRESS
P.O. Box 201
CITY AND STATE
Moscow, Ohio 45153
SUBMITTED BY
Ben Evans

ANALYSIS NO. 9-703

7070-36375
PURCHASE ORDER NO.

Page 1 of 12

DATE 10/31-11/5/79

#553-2011 231

OBJECTIVE: Electrical Hanger Weldments Macro Evaluation.

COMPOSITION:

HISTORY: Per KE Form E-6
20-33

SPECIAL INSTRUCTIONS: Additional sectioning required of some submitted specimens to facilitate desired evaluation. Macro polish, etch & photo @ 3X. Evaluate weld profiles & record data as per Analysis 9-692. Preserve macro surface after evaluation.

RESULTS: Scale marked 3X photographs (42-76) Page 3-9. Arrow noted lack of fusion indications.
Fillet cross section evaluation data Pages 10-12.

METALLOGRAPHER: T. Williams, M. G. Bolinger, Jr.



1034 WOODROW STREET • CINCINNATI, OHIO 45204

REQUESTOR
Henry J. Kaiser Co.
ADDRESS
P.O. Box 201
CITY AND STATE
Moscow, Ohio 45153
SUBMITTED BY
Ben Evans
#553-2011 231

ANALYSIS NO. 9-779
PURCHASE ORDER NO. _____
Page 1 of 18
DATE 11/28-12/7/

OBJECTIVE:

Electrical Hanger Weldments Macro Evaluation.

COMPOSITION:

HISTORY:

KE# 34 - 64.

SPECIAL INSTRUCTIONS:

Additional sectioning required of some submitted specimens to facilitate desired evaluation.
Macro polish, etch & photo @ 3X. Evaluate weld profiles & record data as per Analysis 9-692.
Preserve macro surface after evaluation.

RESULTS:

Scale marked 3X photographs (1-64) Page 2 - 12.
Arrow noted lack of fusion indications.

Fillet cross section evaluation data Pages 13 - 18.

h
METALLOGRAPHER: T. Williams, M. G. Bolinger, Jr.



1034 WOODROW STREET • CINCINNATI, OHIO 45204

Henry J. Kaiser Co.

REQUESTOR

P.O. Box 201

ADDRESS

Moscow, Ohio 45153

CITY AND STATE

Ben Evans, Dave Sandlin

SUBMITTED BY

ANALYSIS NO. 058

PURCHASE ORDER NO. 29430

Page 1 of 4

DATE 1/24-31/80

OBJECTIVE:

Electrical Hanger Weldment Macro Evaluation.
Small Section X
Large Section Y

COMPOSITION:

Ref.: KE # 60B Analysis 9-779, Macro Photo No. 56.

HISTORY:

Slight lack of fusion @ root and less than full root penetration.

SPECIAL INSTRUCTIONS:

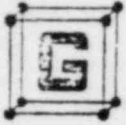
Additional incremental macro evaluation of remaining subject fillet weld to determine linear extent of noted indications. All weld profiles 600 grit micro polish. Etchant $(\text{NH}_4)_2\text{S}_2\text{O}_5 + \text{H}_2\text{O}$

RESULTS:

The section "X" used for initial evaluation and the mating section "Y" resulting from the initial saw cut were macro evaluated as follows:

1. Determine relocatable starting dimension
2. Repeated - Grind, polish, etch & macro evaluation @ 8-13X to determine extent of noted indication.
3. After indication completely removed final dimension provides a value as to the linear extent of indication for each section.
4. Since both sections exhibit the indication the initial saw cut .06" & macro grinding .02 - .04" may be considered.

METALLOGRAPHER: M.G. Bolinger, Jr.



GLADSTONE LABORATORIES, INC. AREA CODE 513
921-6700 - 6701

1034 WOODROW STREET - CINCINNATI, OHIO 45204

PHOTO INDEX & DESCRIPTION

PHOTO #

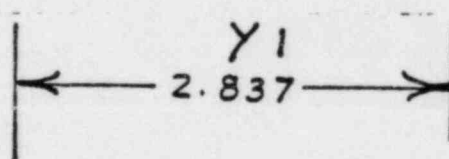
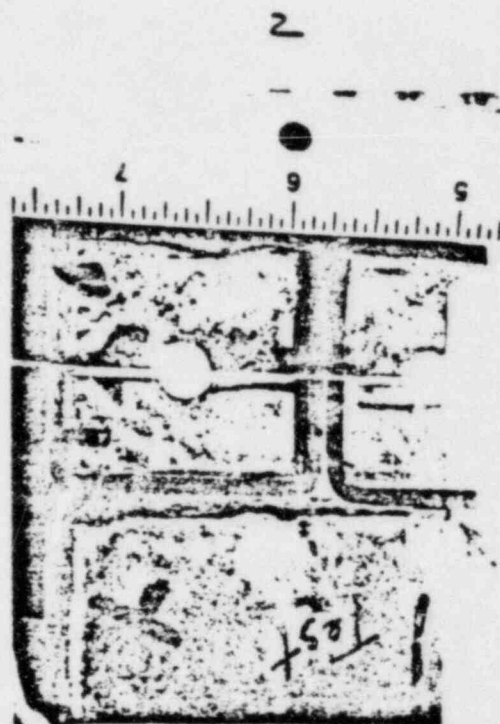
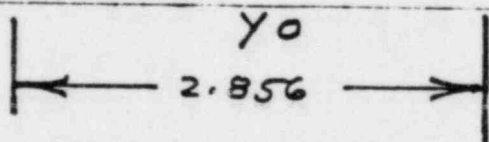
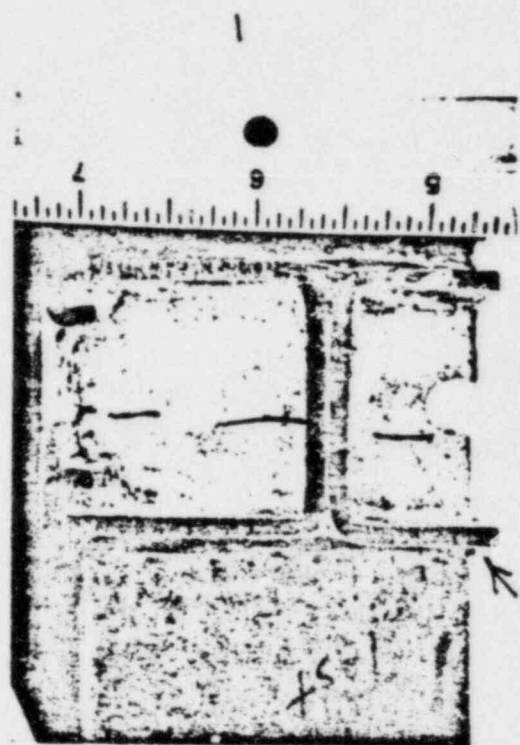
LARGE SECTION Y

1	1X	Y 0 = 2.856 as resubmitted
2	1X	Y 1 = <u>2.837</u> after grinding & polish
		0.019" Removed to eliminate trace of noted indication.
3	3X	Y 1 Weld profile unetched
4	3X	Y 1 Weld profile etched

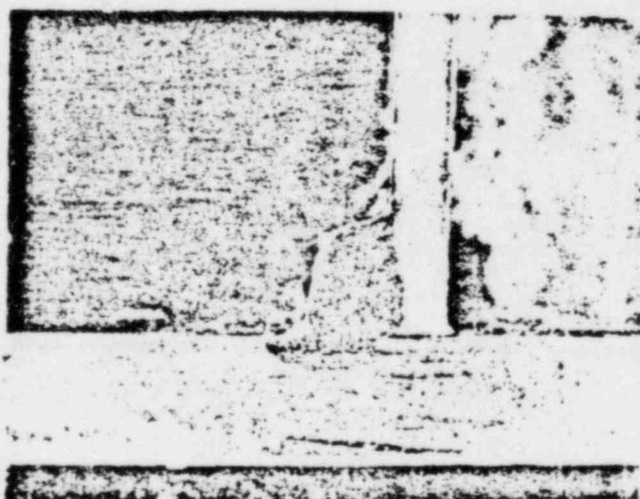
SMALL SECTION X

Section Used for Initial Evaluation Photo # 56 (See Photo # 54-132)
B. E. 8 22-50

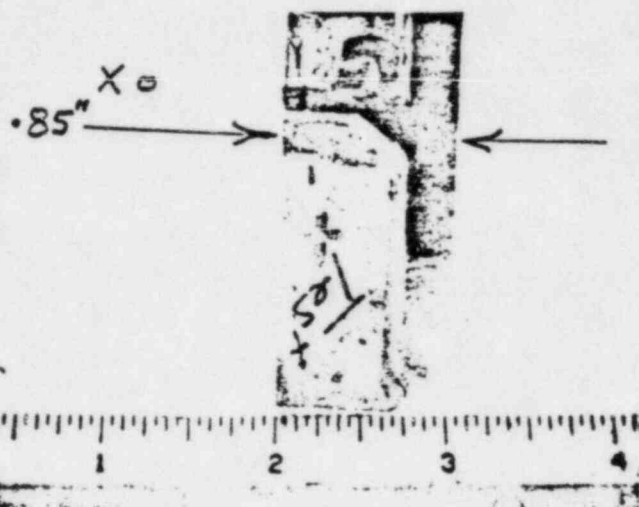
5	1X	X 0 = .85 as resubmitted
6	3X weld	X 1 = .77 Lack of complete root penetration & fusion = .04"
7	3X weld	X 2 = <u>.73</u> after grinding & polish
		.12" Removed to eliminate trace of noted indication.
8	3X	X 2 Weld profile etched



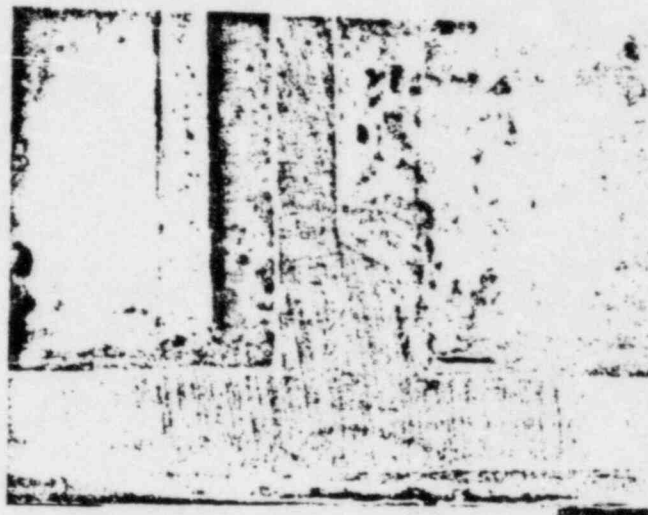
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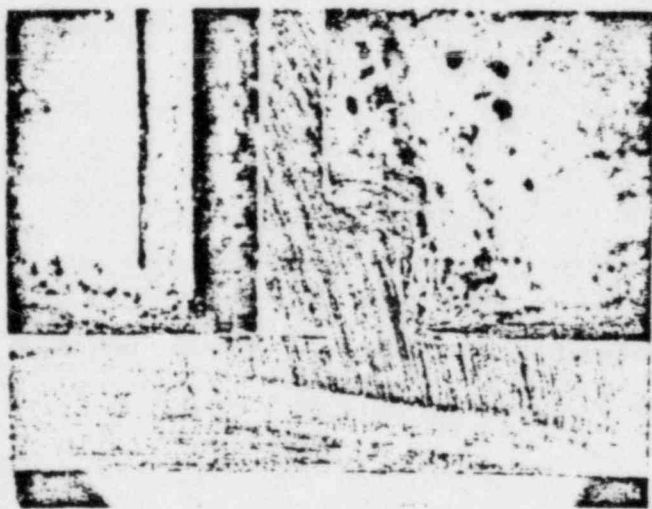
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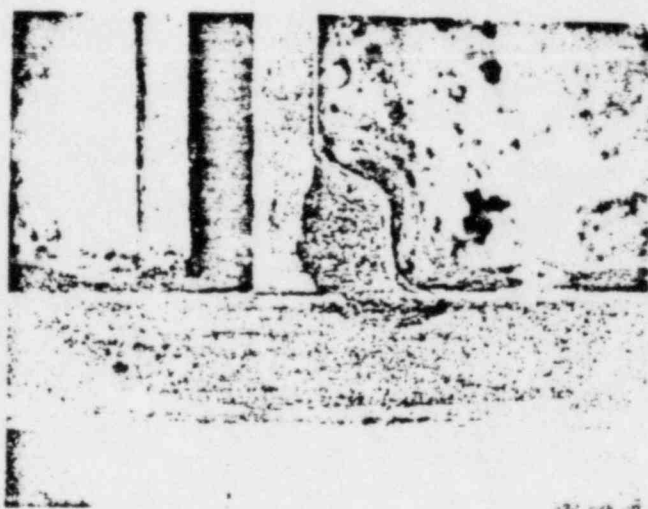
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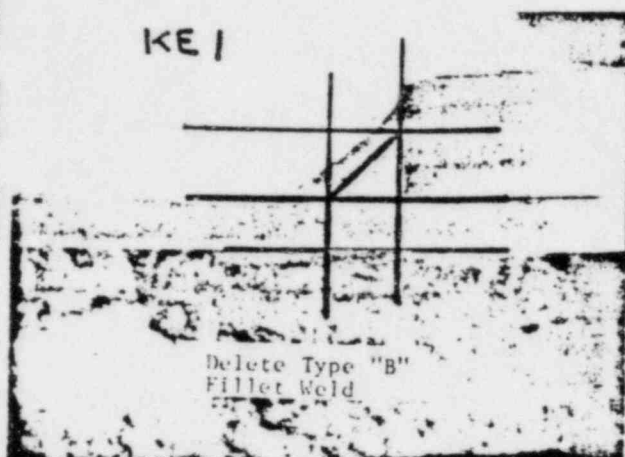
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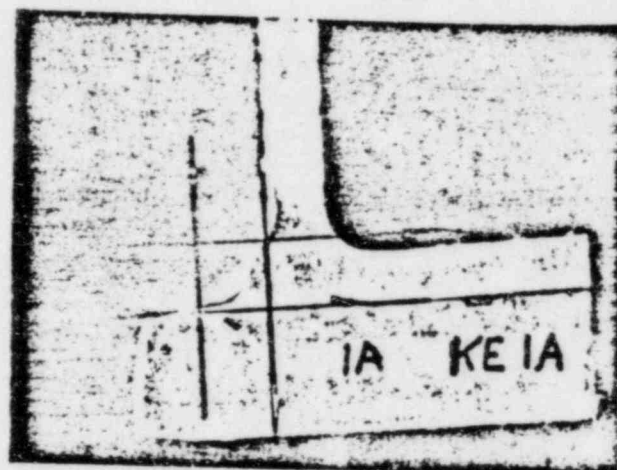
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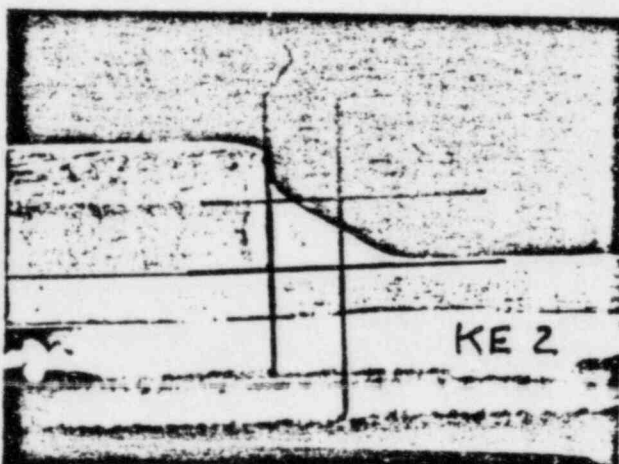
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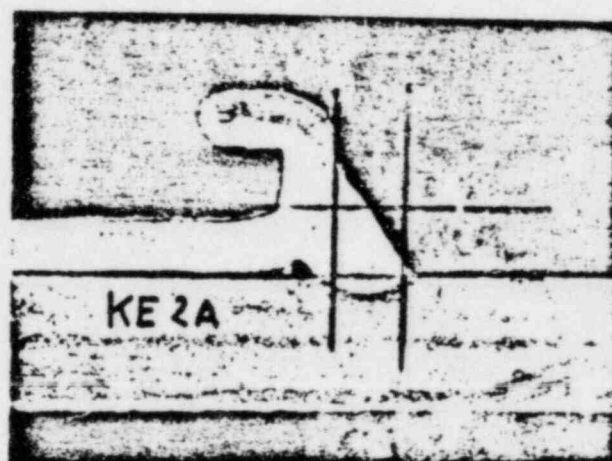
G1 FH1



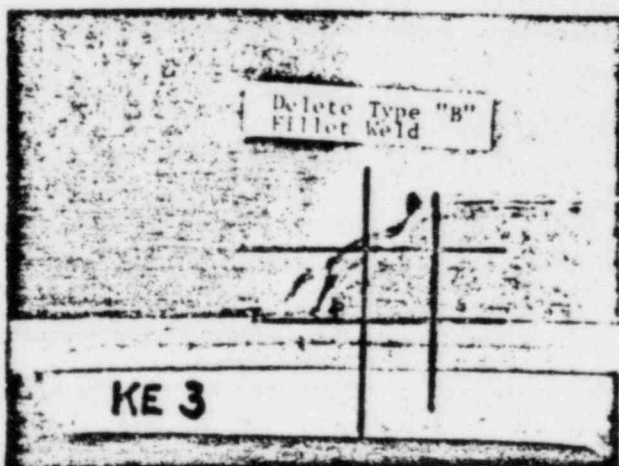
G2 FH2



G3 FH3



G4 FH4



G5 FH5

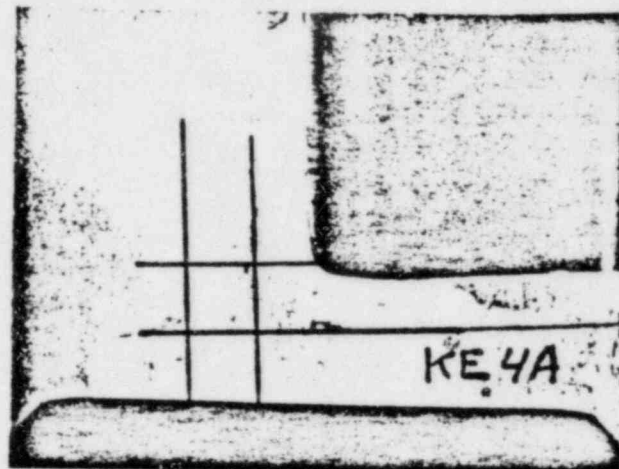


G6 FH6



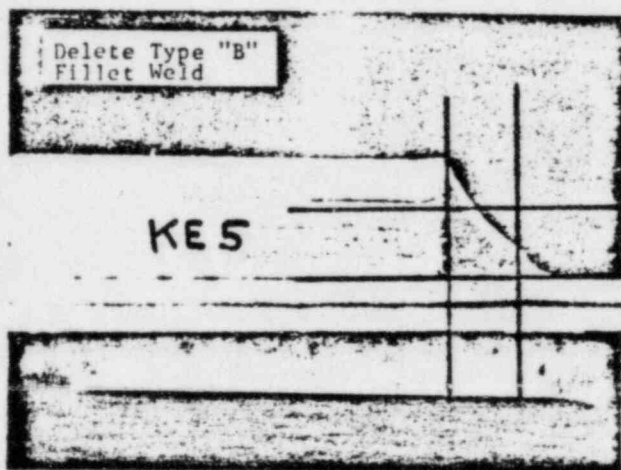
G7

FH7



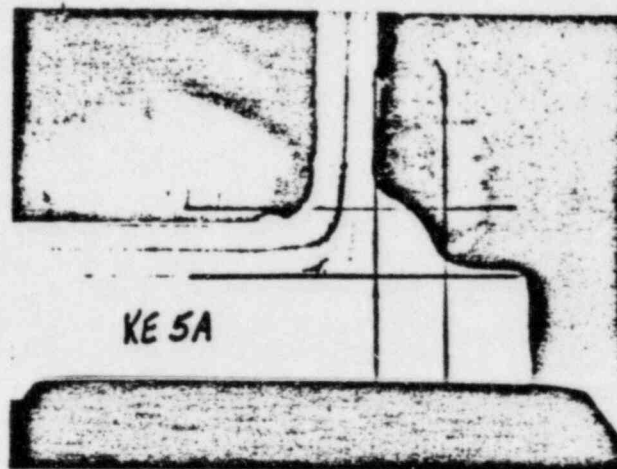
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FH8



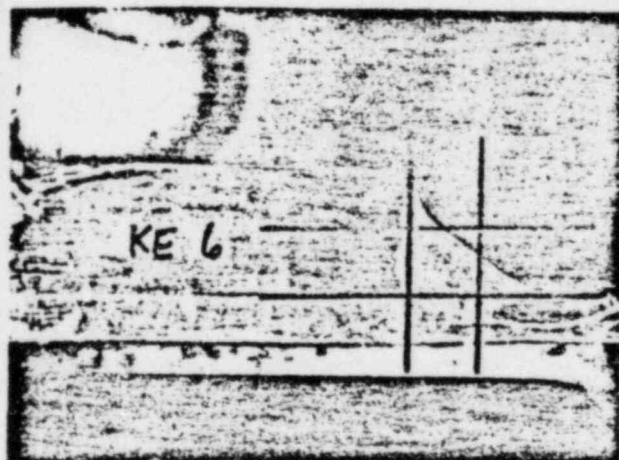
G9

FH9



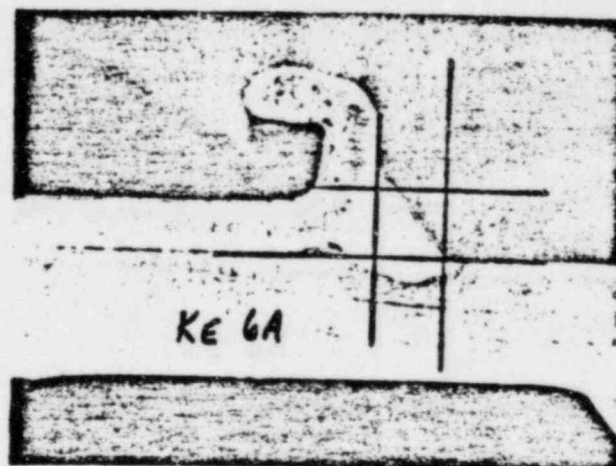
G10

FH10



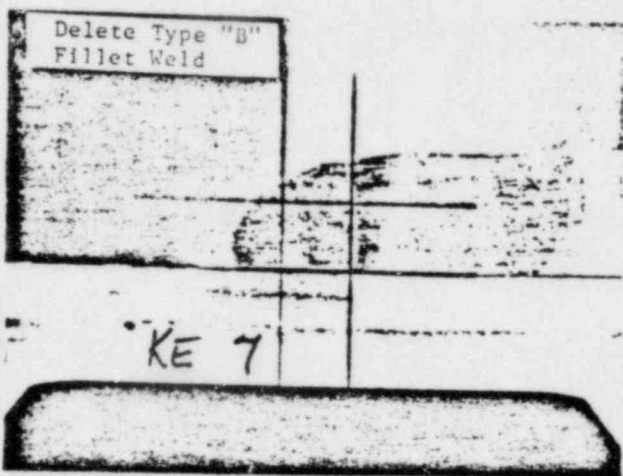
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FH11

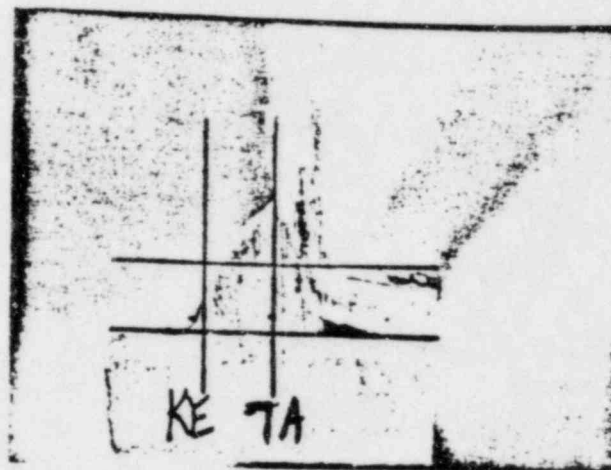


G12

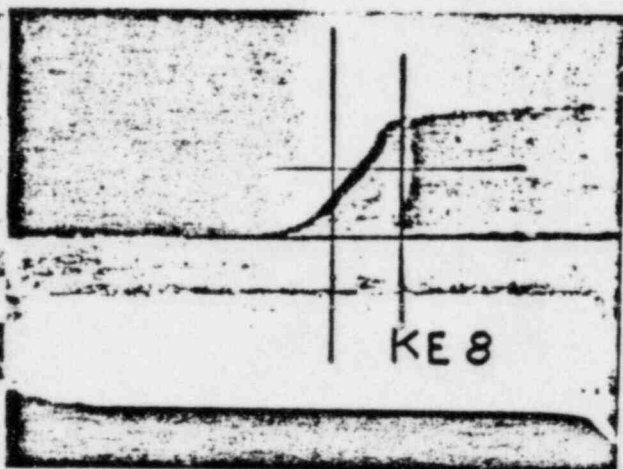
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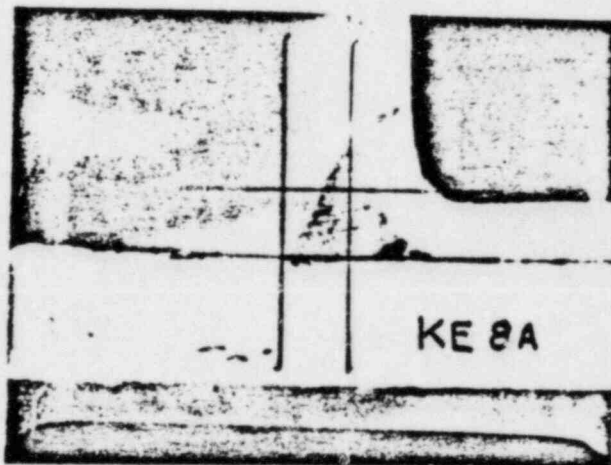
G13 FH13



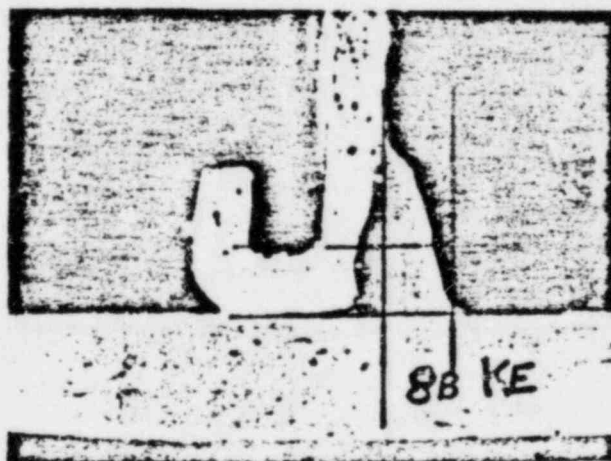
G14 FH14



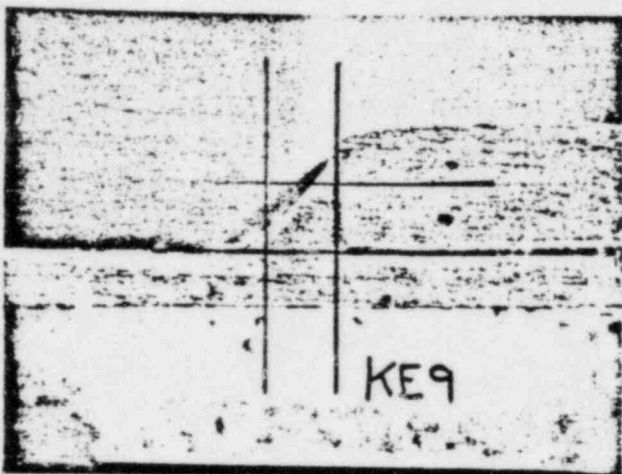
G15 FH15



G16 FH16



G17 FH17



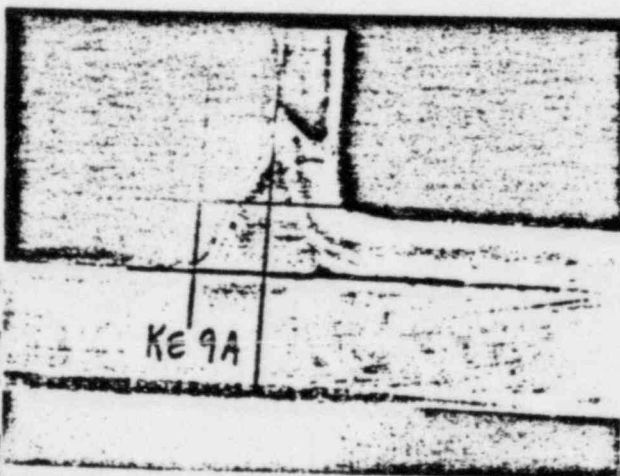
G18

FH18



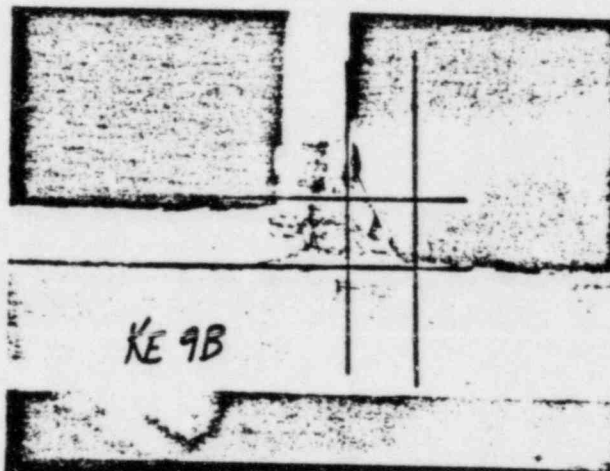
G19

FH19



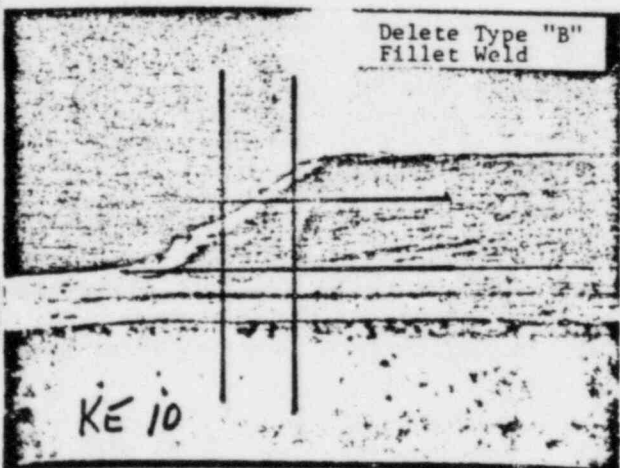
G20

FH20



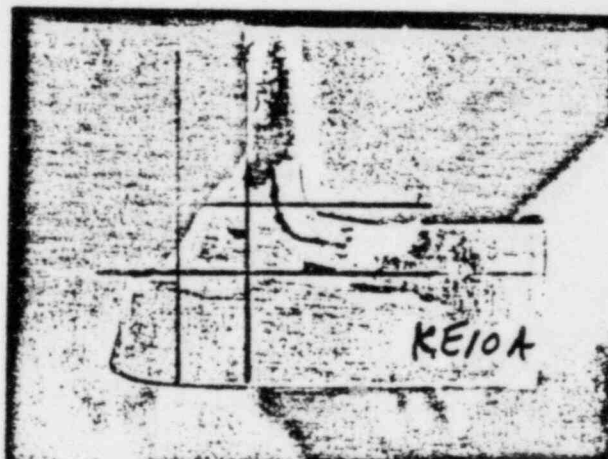
G21

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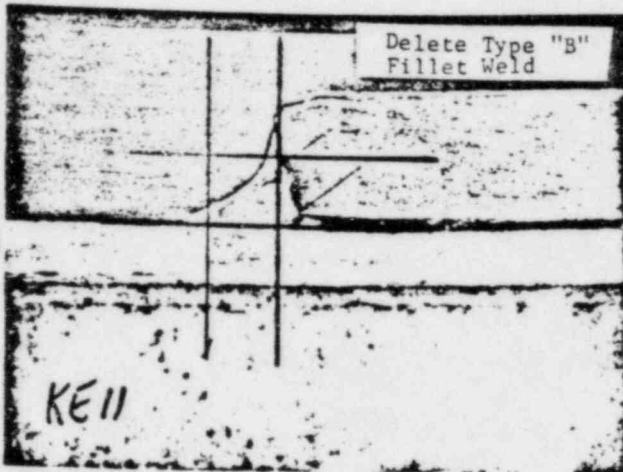
G22

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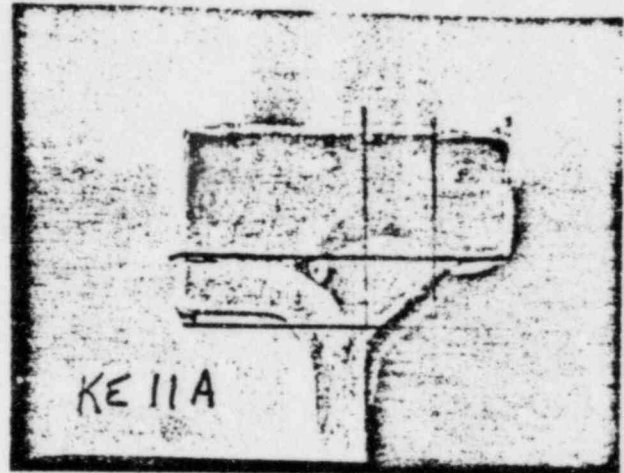
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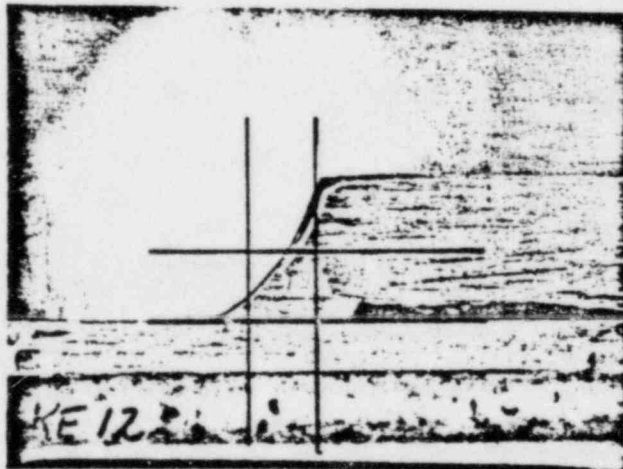
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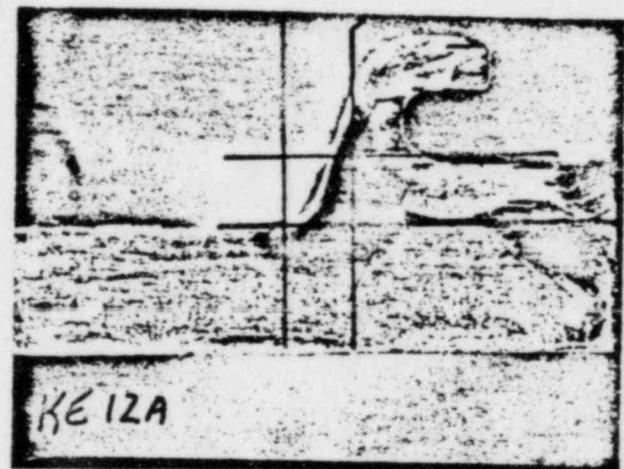
G25

FH25



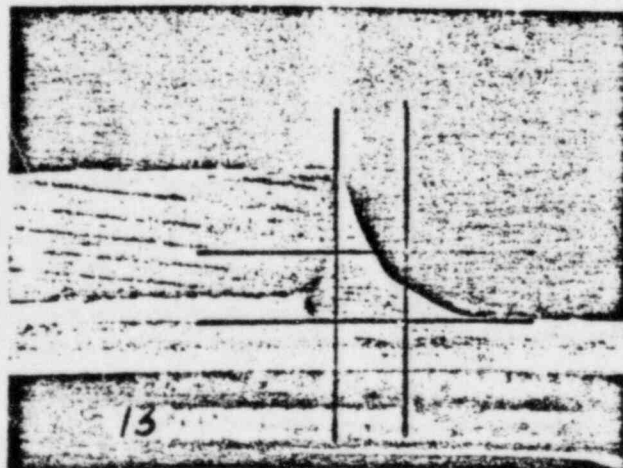
G26

FH26



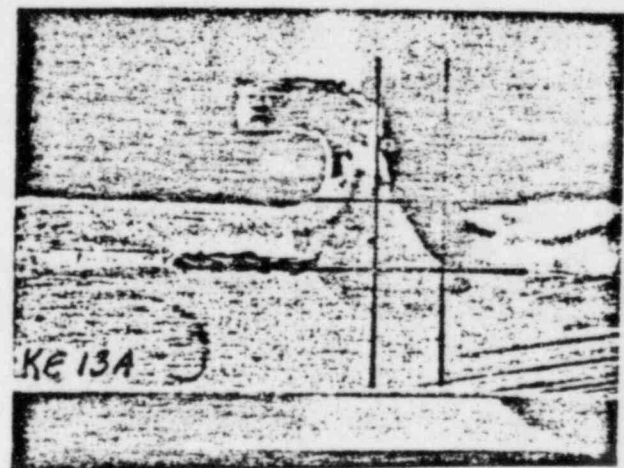
G27

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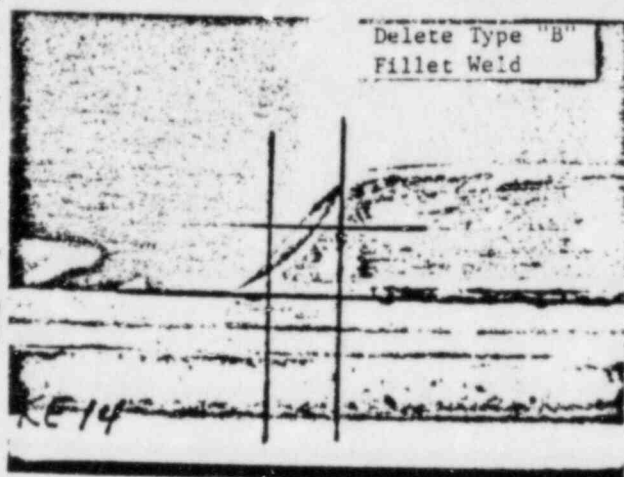
G28

FH18



G29

FH29



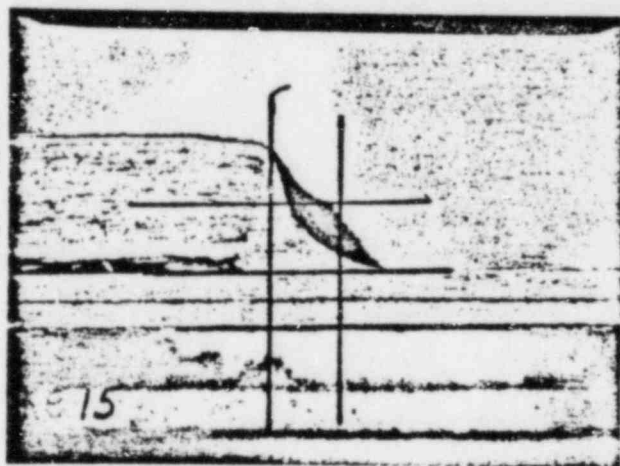
G30

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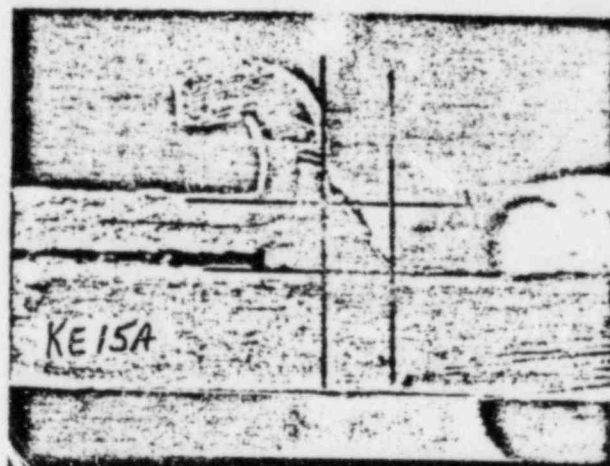
G31

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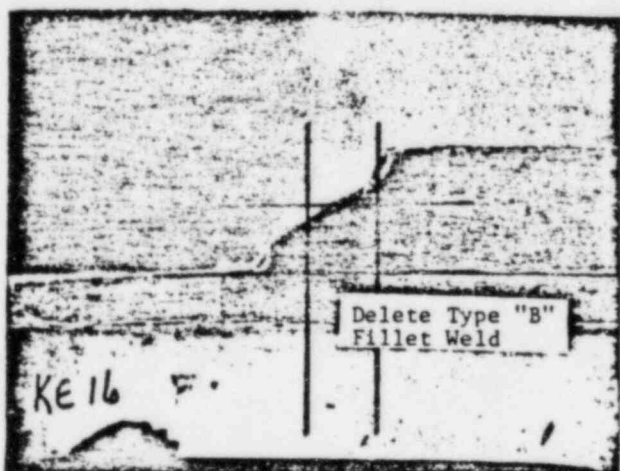
G32

FH32



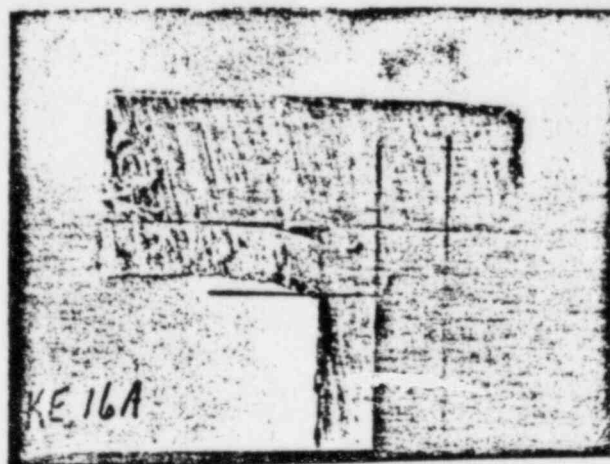
G33

FH33



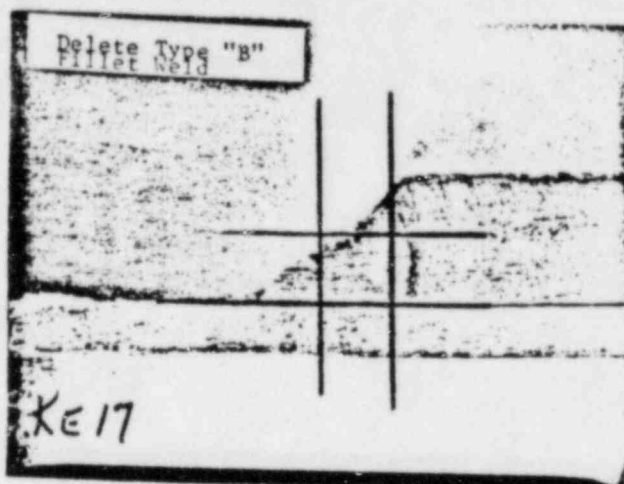
G34

FH34



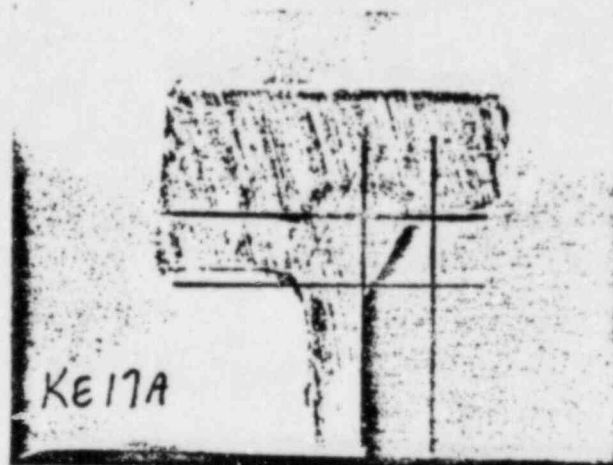
G35

FH35



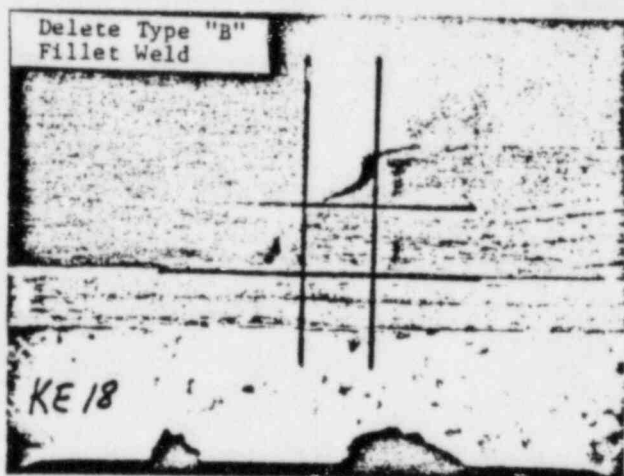
G36

FH36



G37

FH37



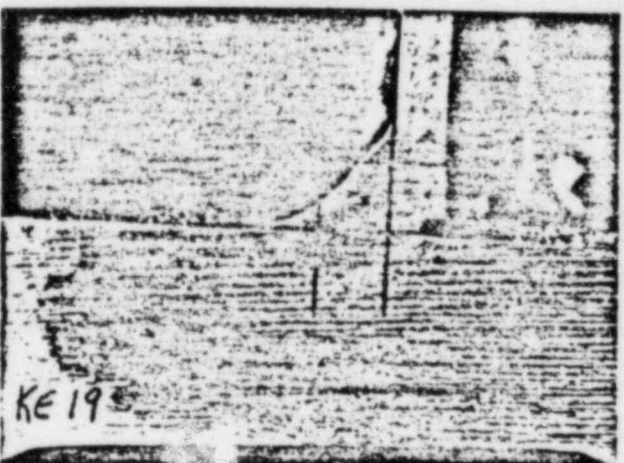
G38

FH38



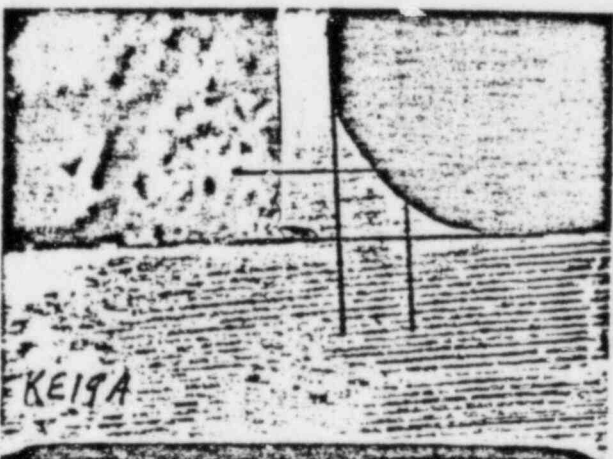
G39

FH39



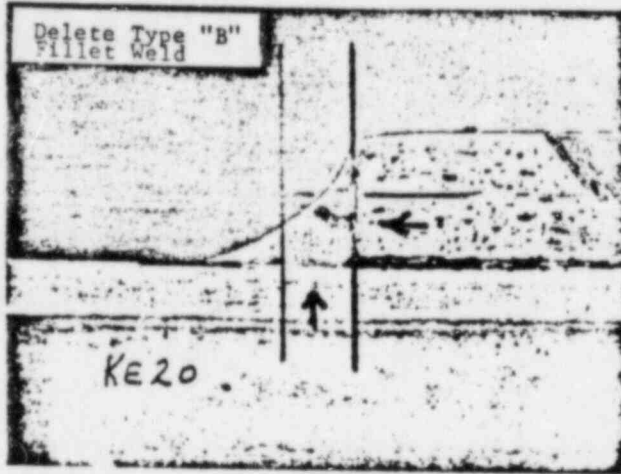
G40

FH40



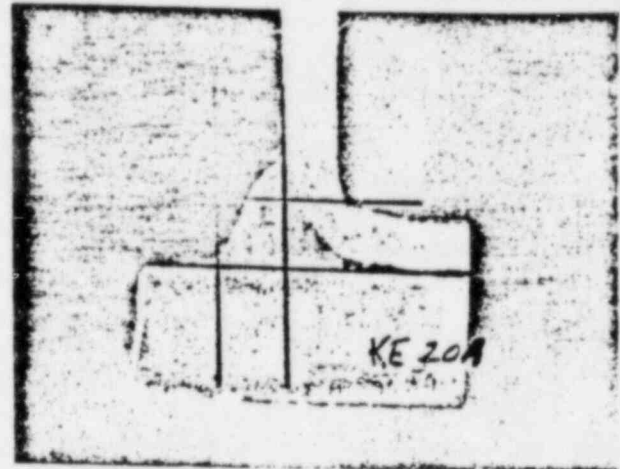
G41

FH41



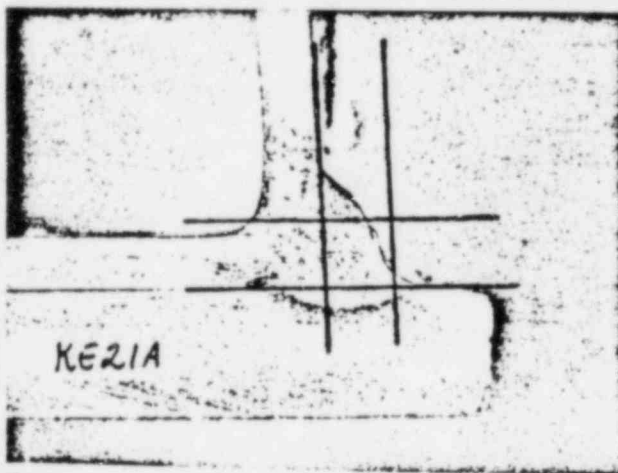
G42

FH42



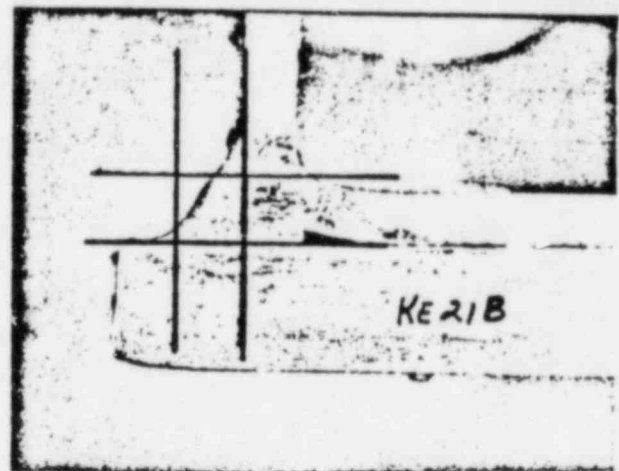
G43

FH43



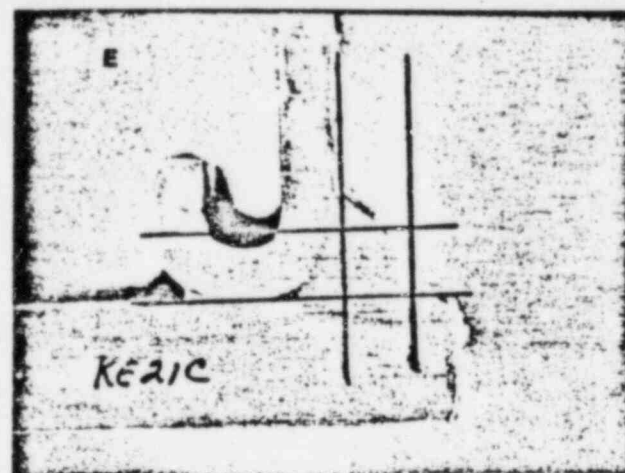
G44

FH44



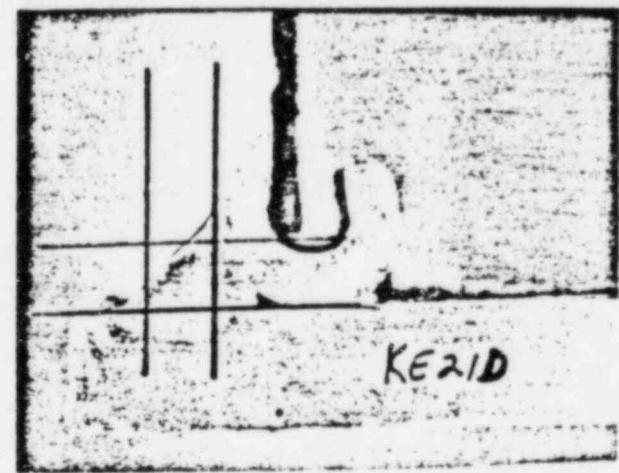
G45

FH45



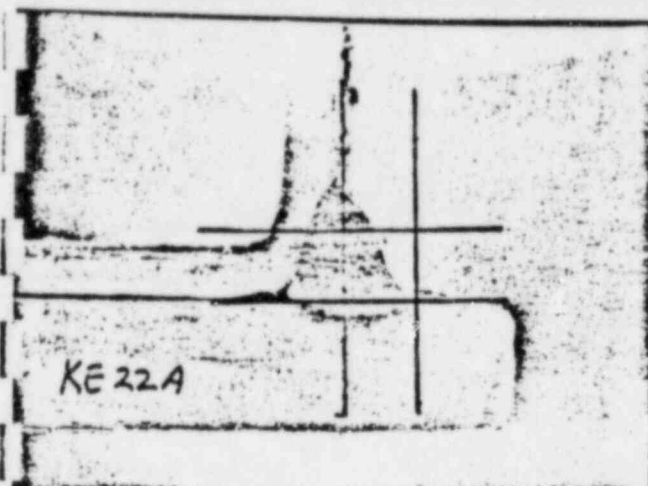
G46

FH46



G47

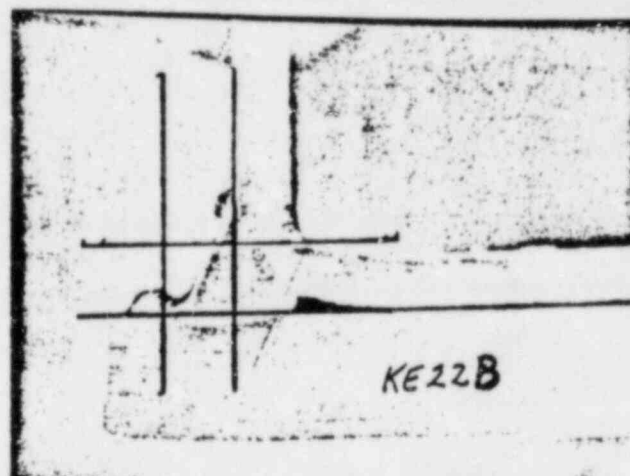
FH47



KE 22A

G48

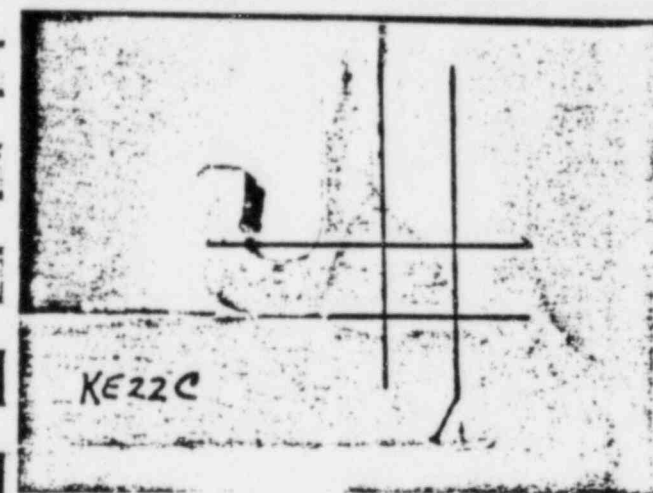
FH48



KE 22B

G49

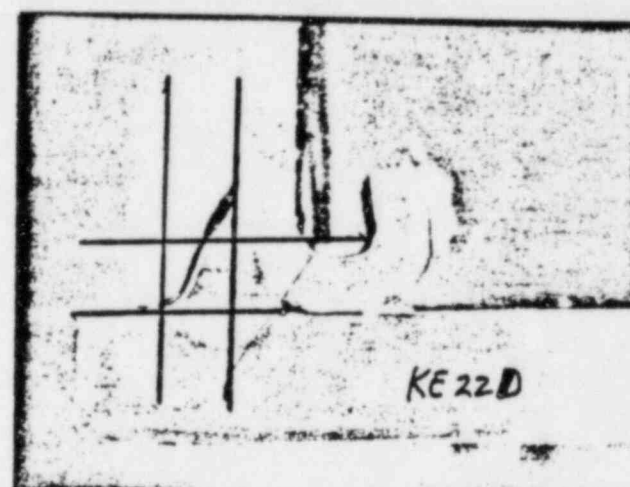
FH49



KE 22C

G50

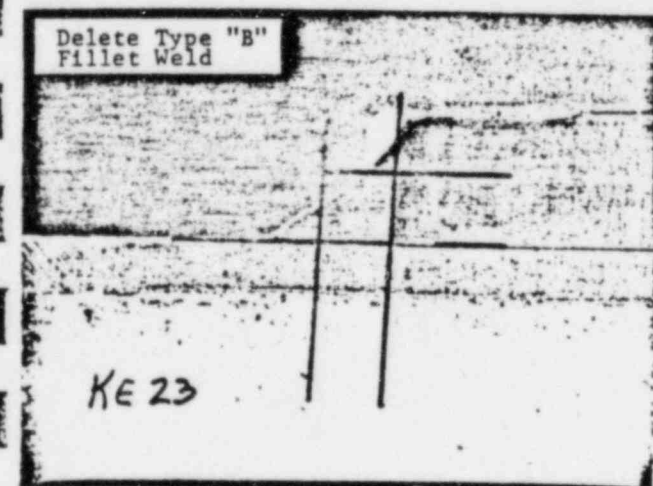
FH50



KE 22D

G51

FH51

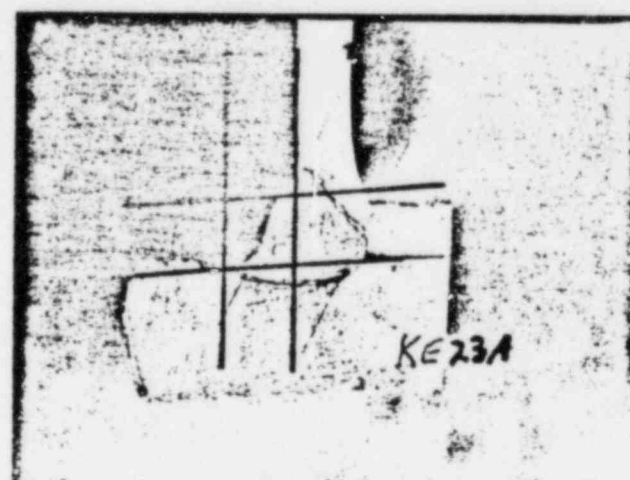


Delete Type "B"
Fillet Weld

KE 23

G52

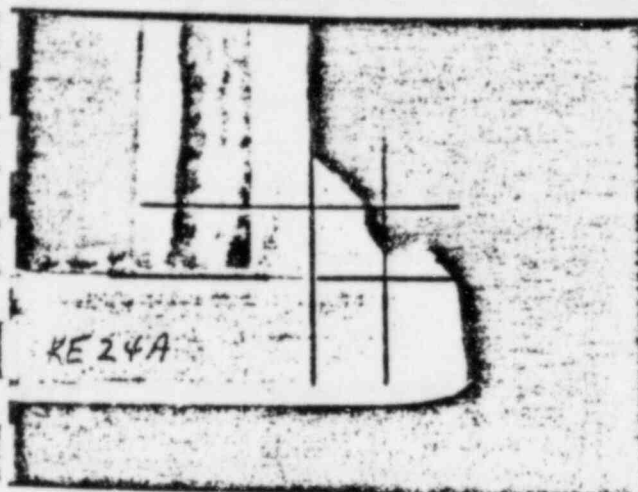
FH52



KE 23A

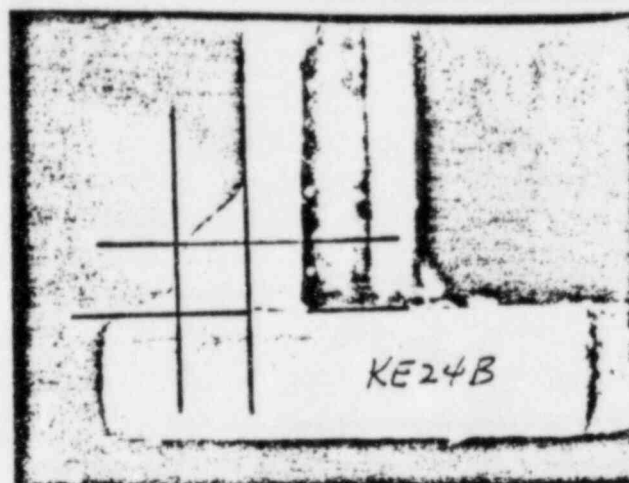
G53

FH53



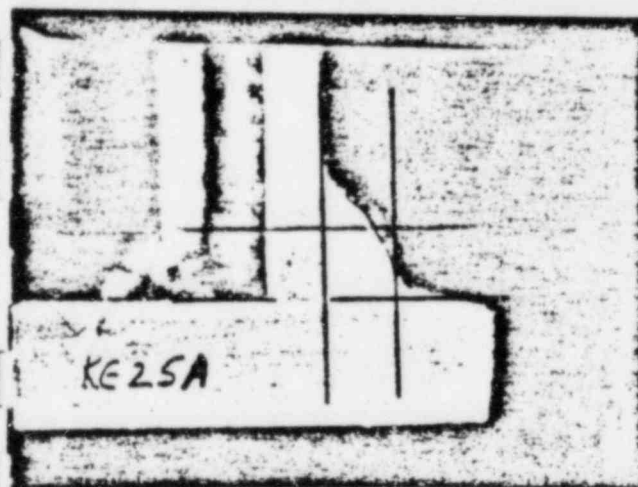
G54

FH54



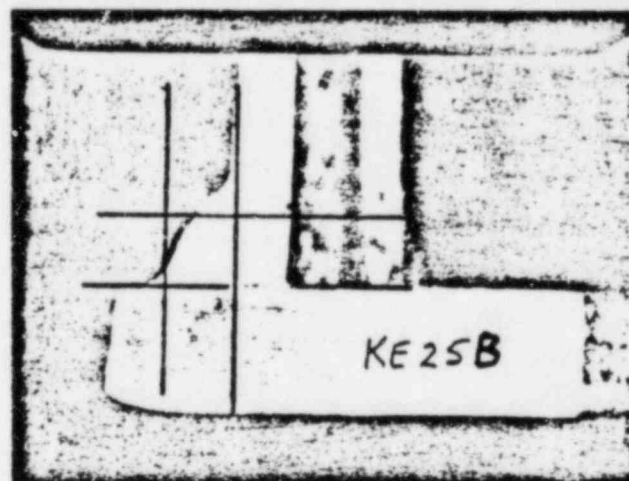
G55

FH55



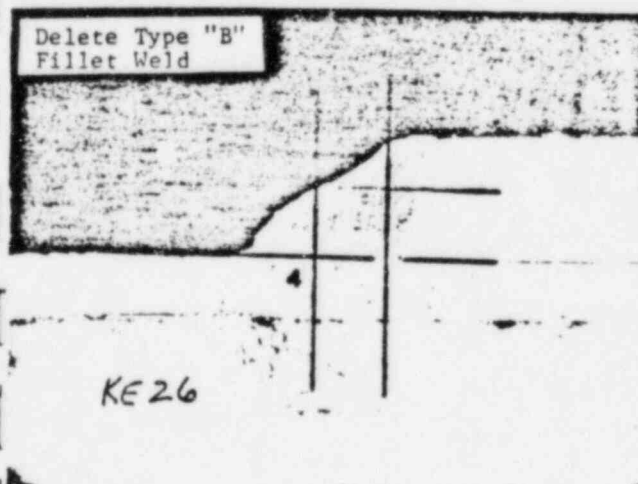
G56

FH56



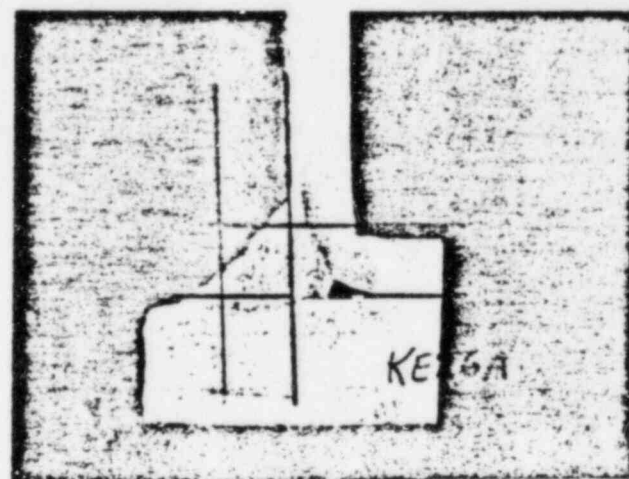
G57

FH57



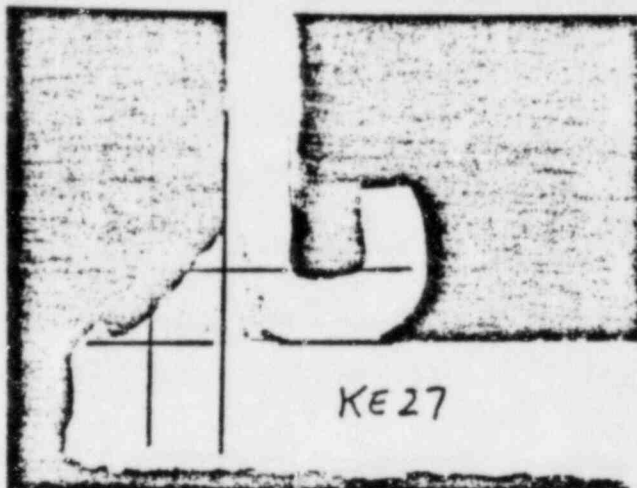
G58

FH58



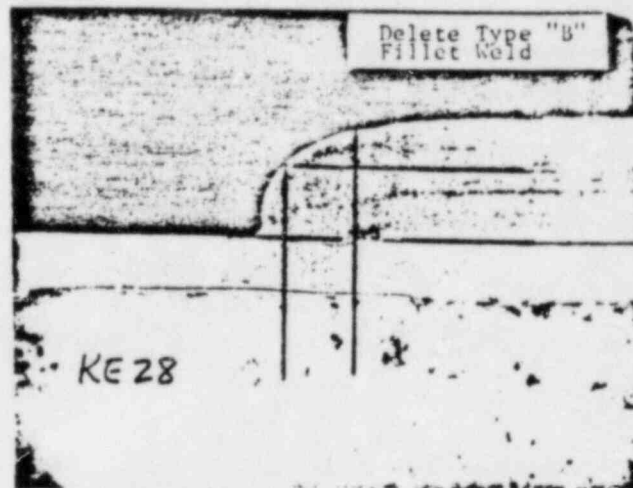
G59

FH59



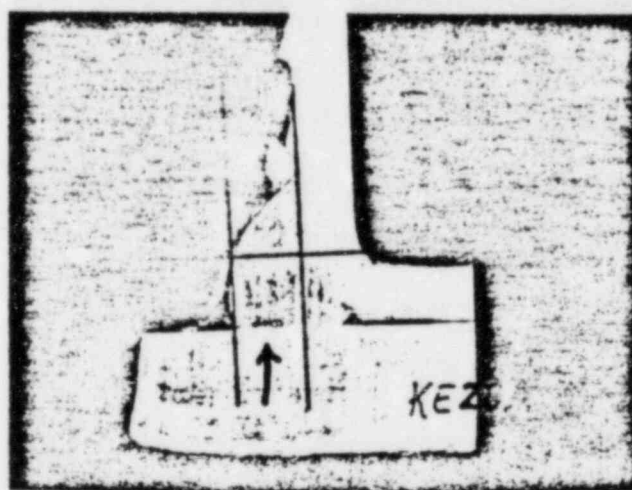
G60

FH60



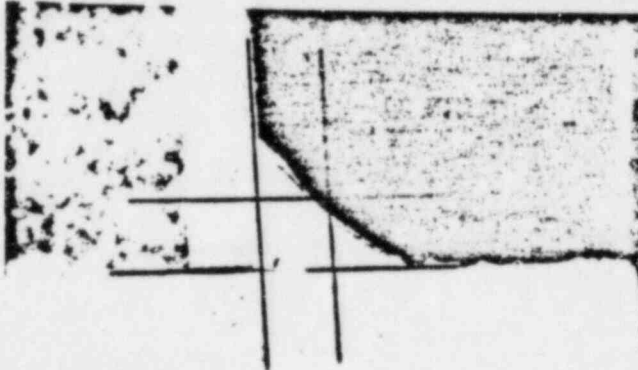
G61

FH61



G62

FH62



KE29A

G63

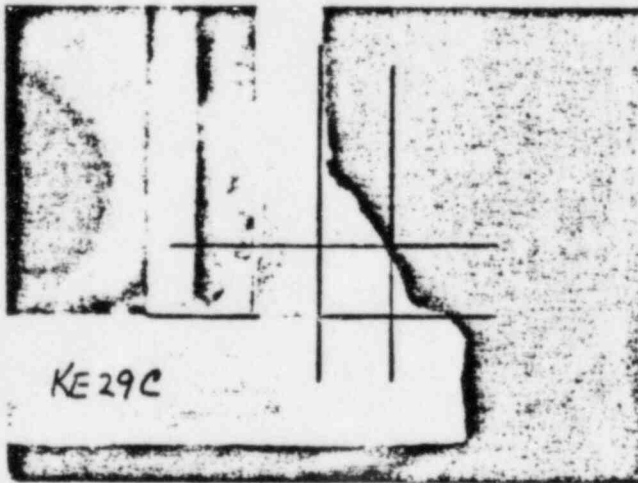
FH63



KE29B

G64

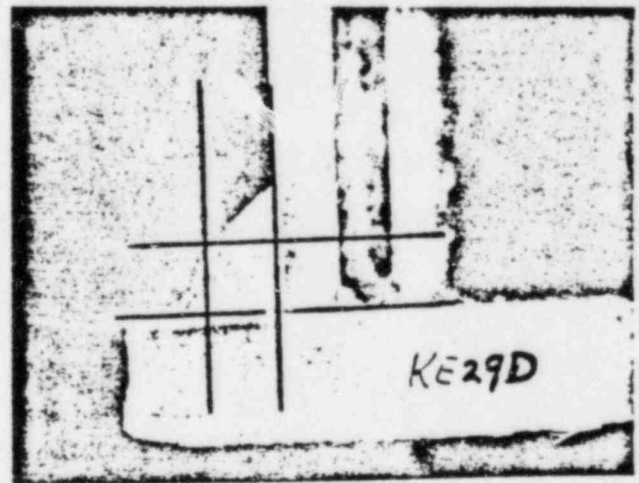
FH64



KE29C

G65

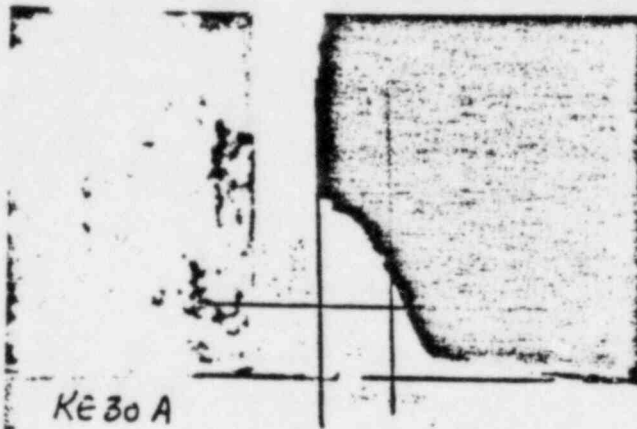
FH65



KE29D

G66

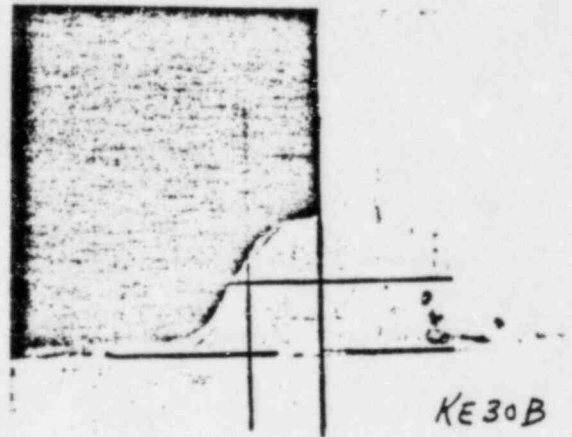
FH66



KE30A

G67

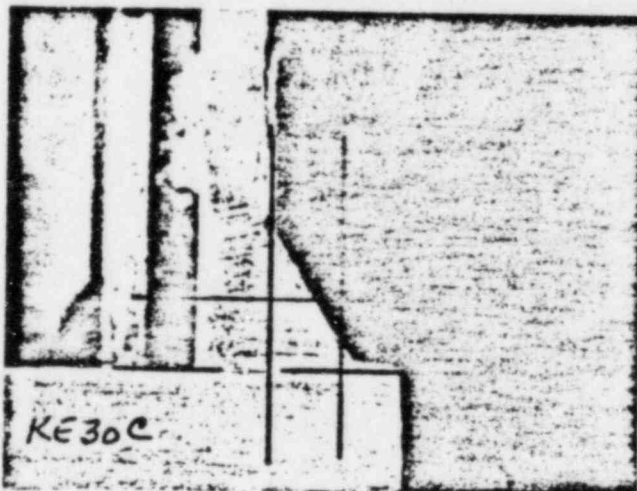
FH67



KE30B

G68

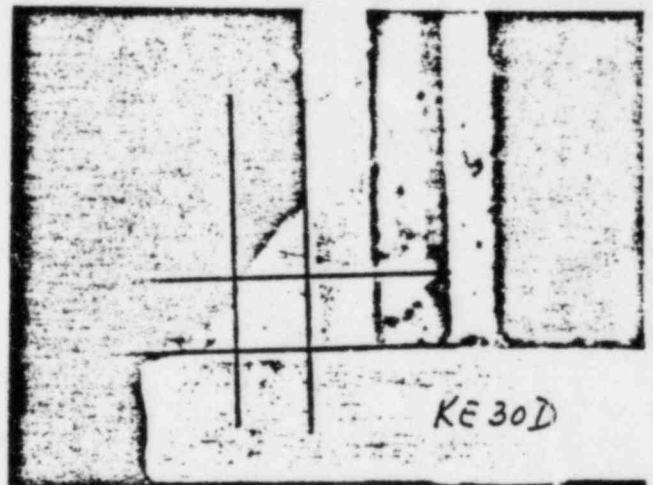
FH68



KE30C

G69

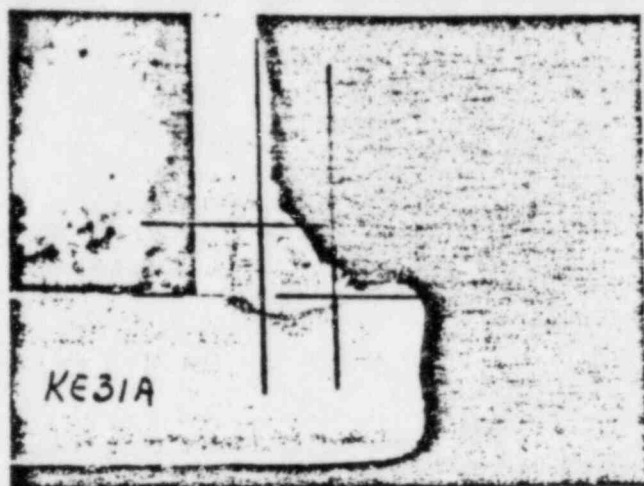
FH69



KE30D

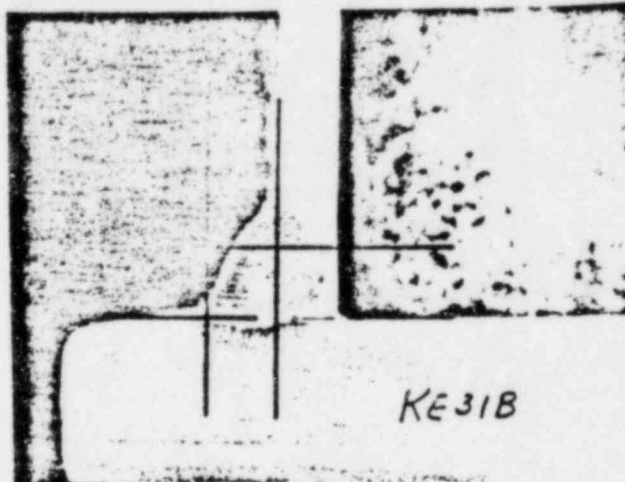
G70

FH70



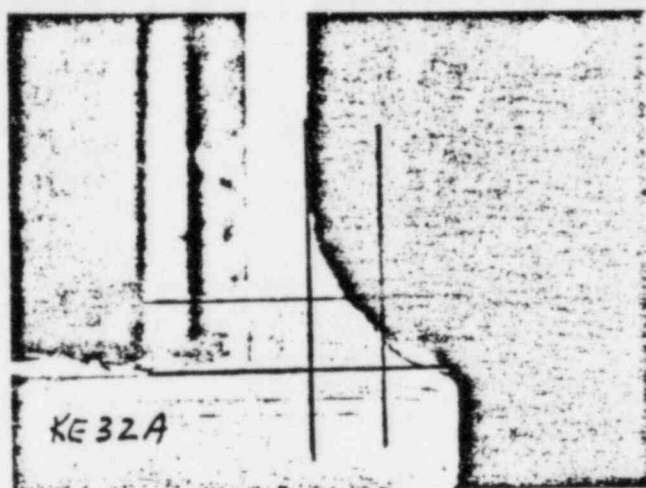
G71

FH71



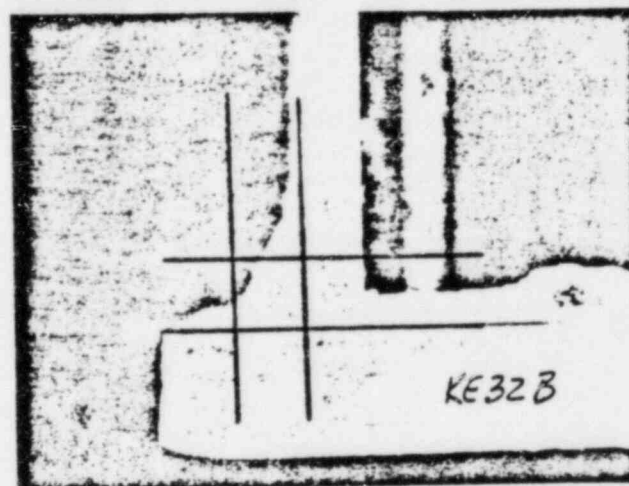
G72

FH72



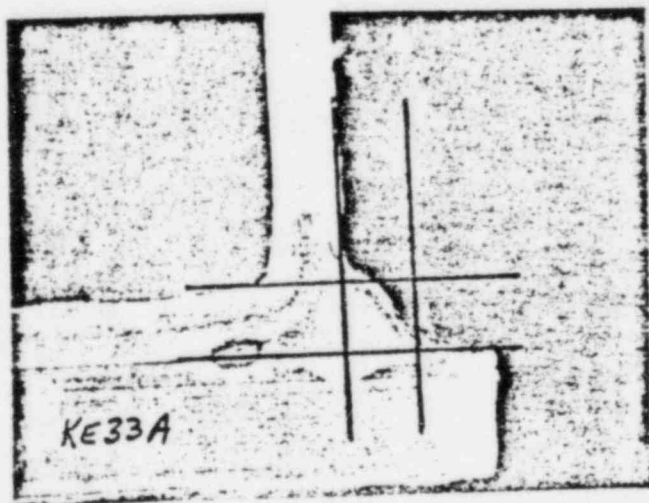
G73

FH73



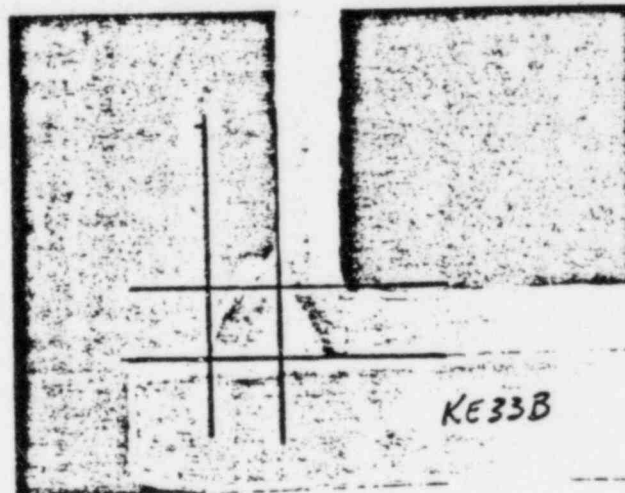
G74

FH74



G75

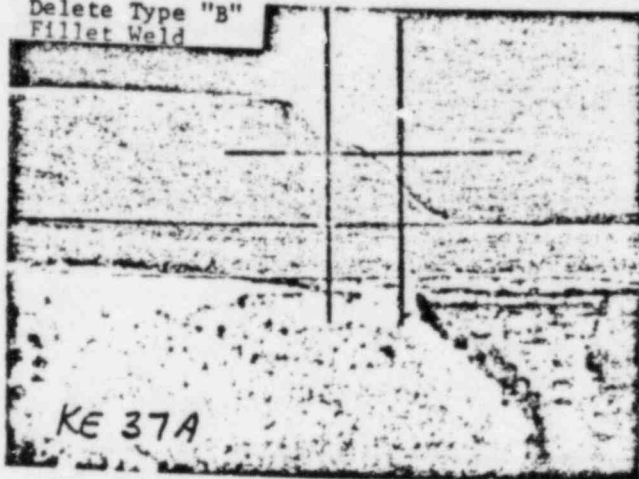
FH75



G76

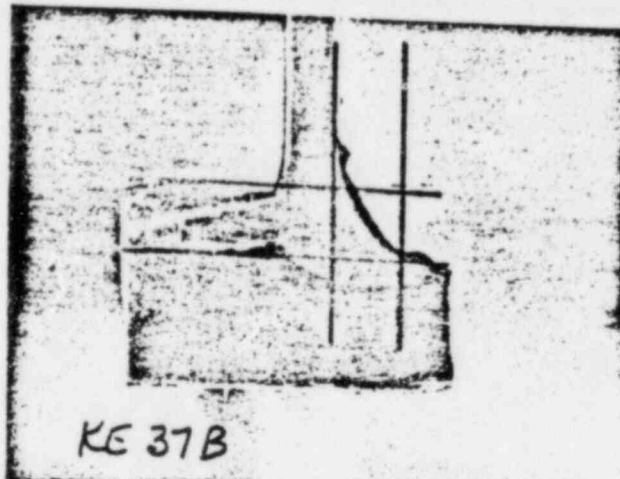
FH76

Delete Type "B"
Fillet Weld



G7

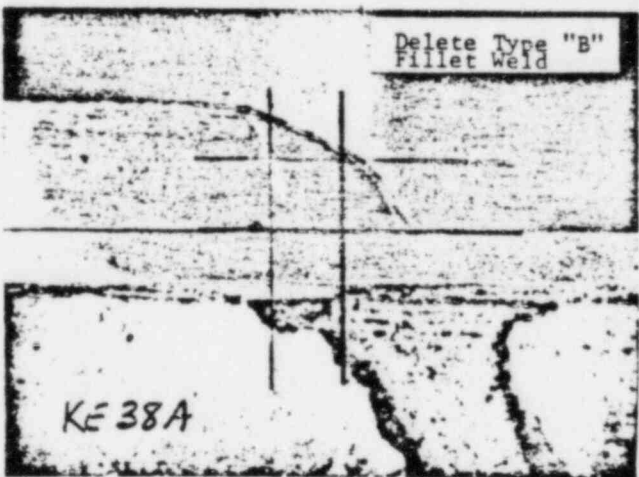
FH83



G8

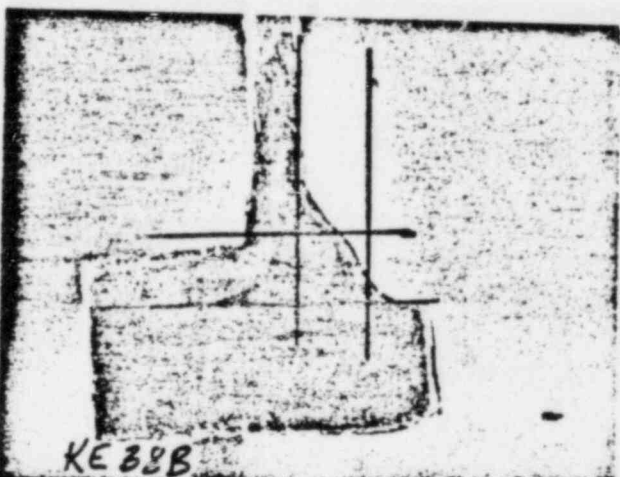
FH84

Delete Type "B"
Fillet Weld



G9

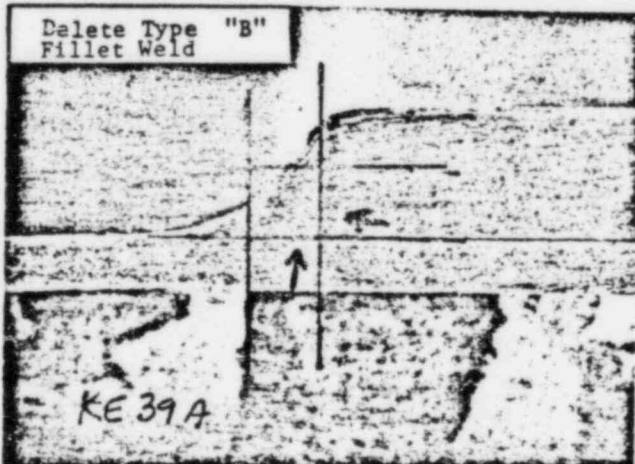
FH85



G10

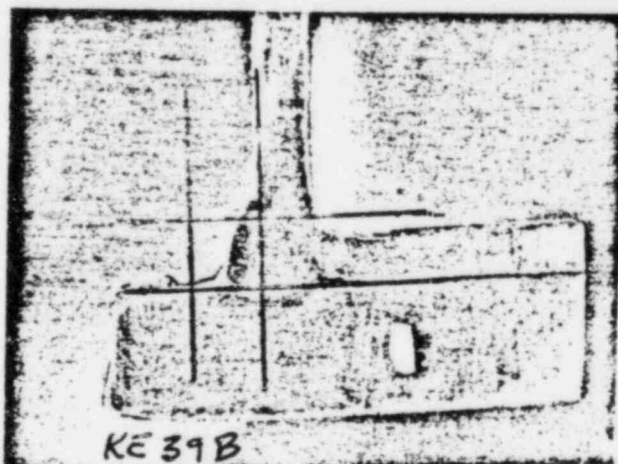
FH86

Delete Type "B"
Fillet Weld



G11

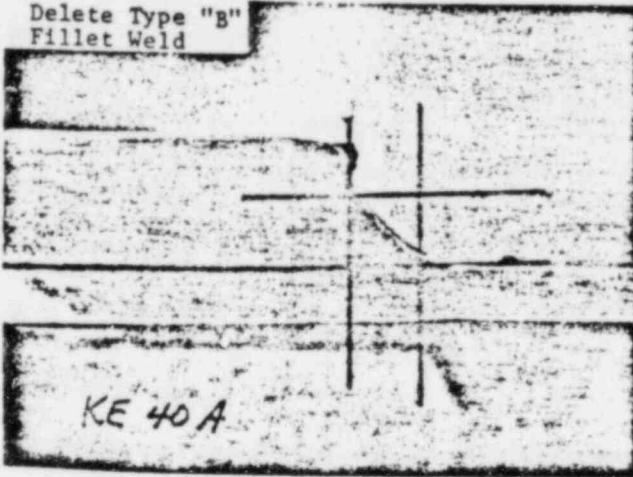
FH87



G12

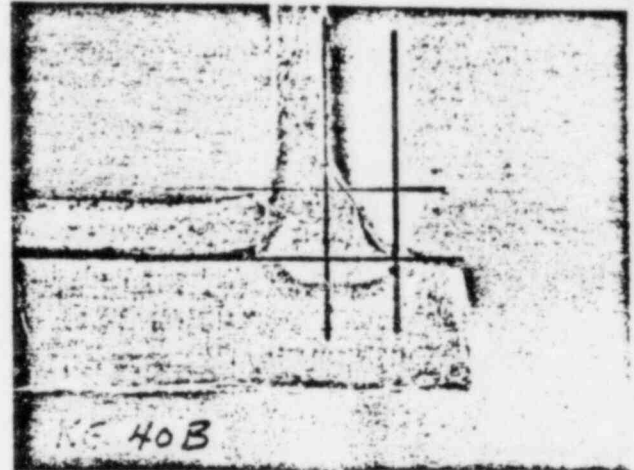
FH88

Delete Type "B"
Fillet Weld



G13

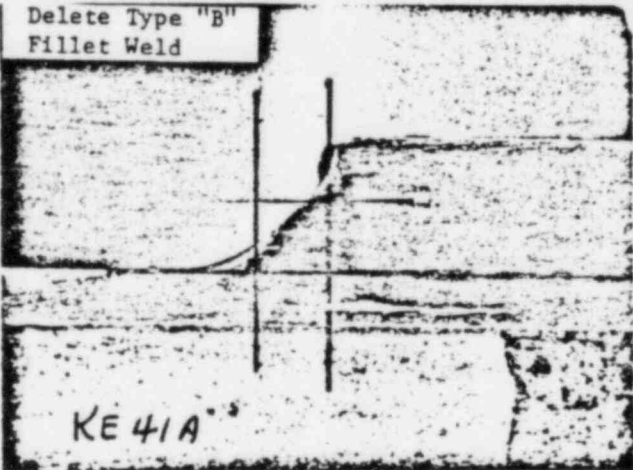
FH89



G14

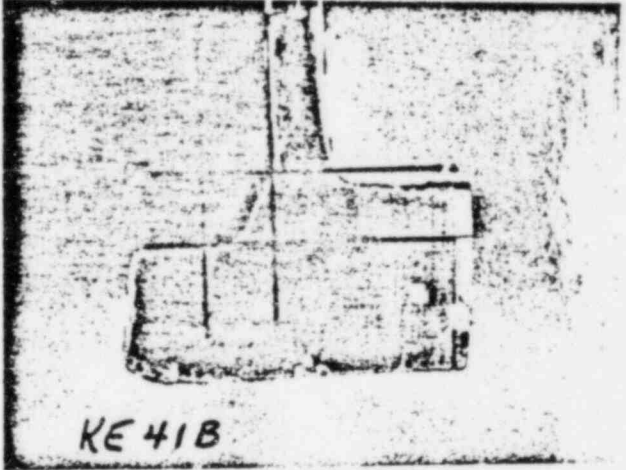
FH90

Delete Type "B"
Fillet Weld



G15

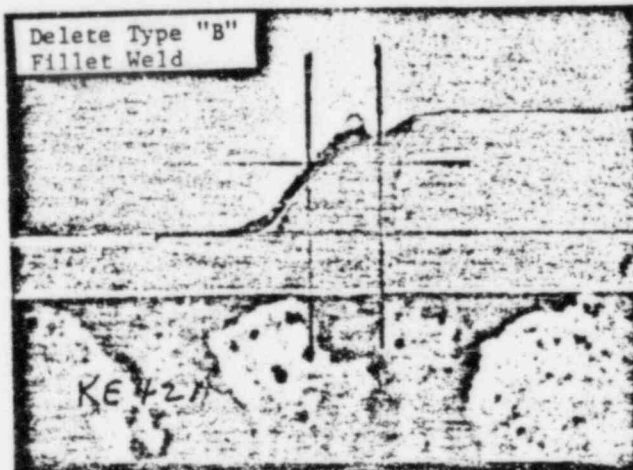
FH91



G16

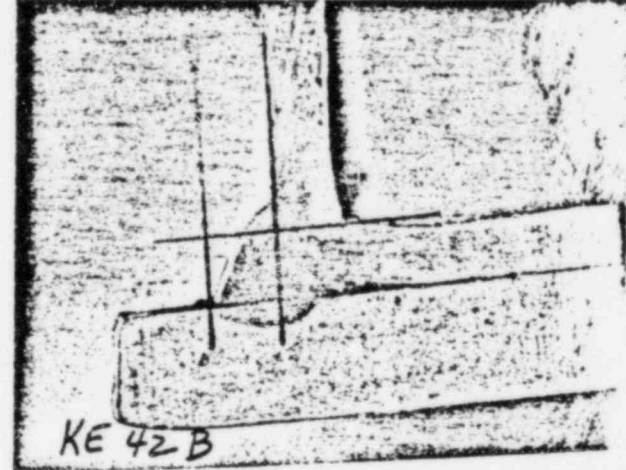
FH92

Delete Type "B"
Fillet Weld



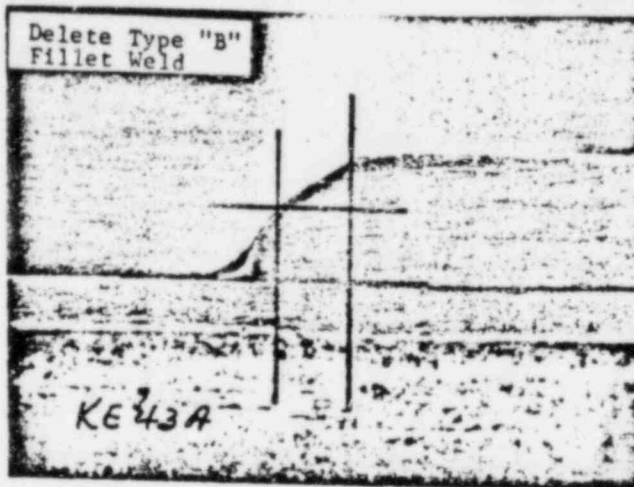
G17

FH93



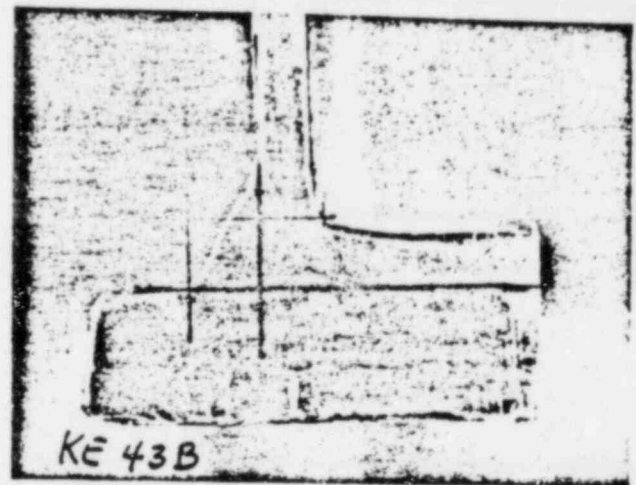
G18

FH94



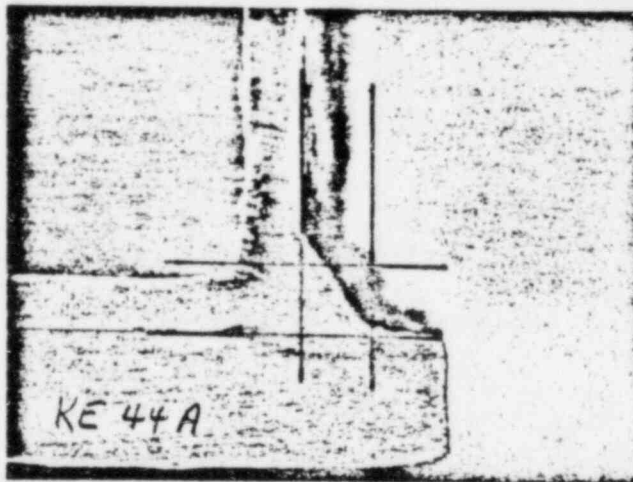
G19

FH95



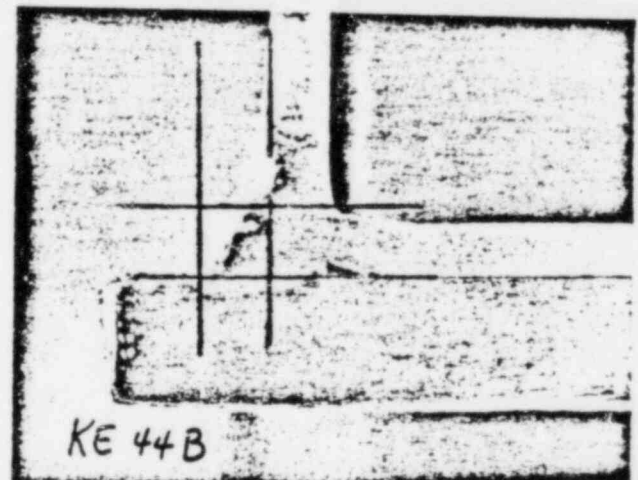
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FH96



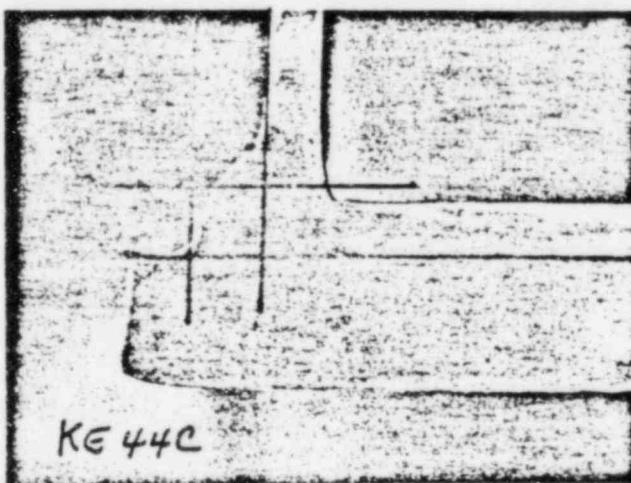
G21

FH97



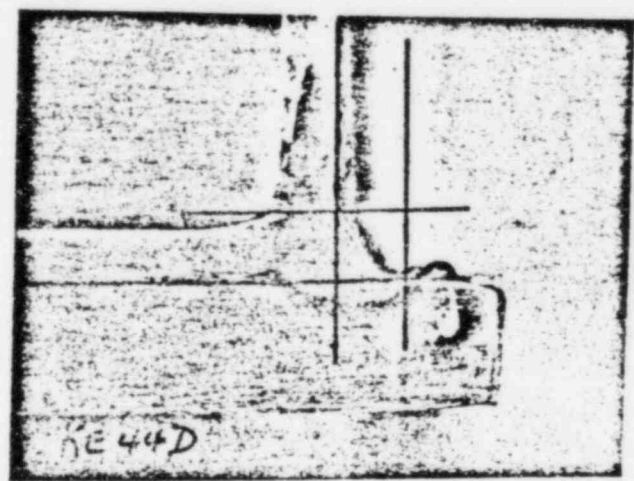
G22

FH98



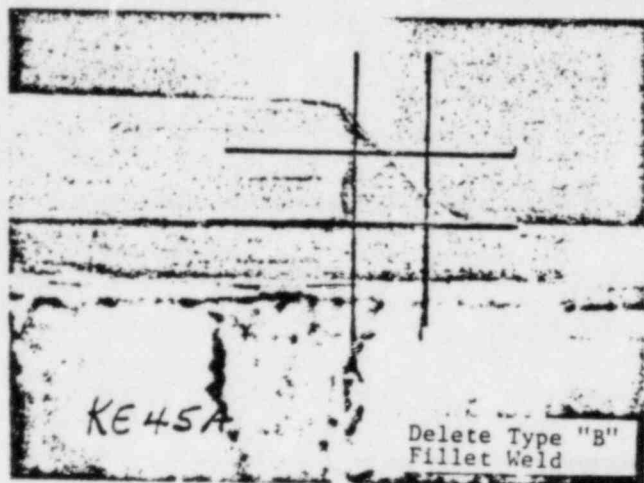
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FH99



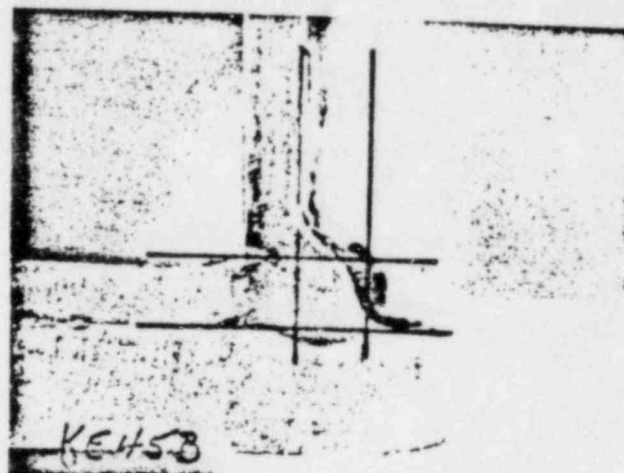
G24

FH100



G25

FH101



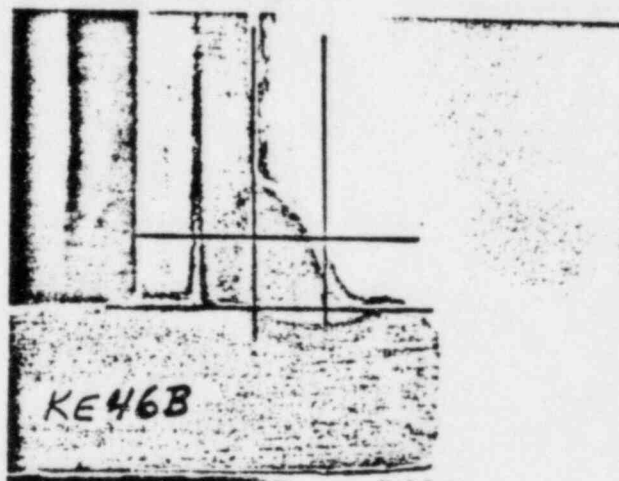
G26

FH102



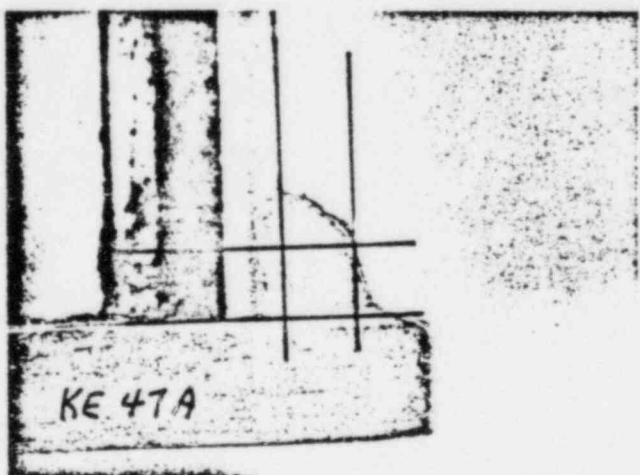
G27

FH103



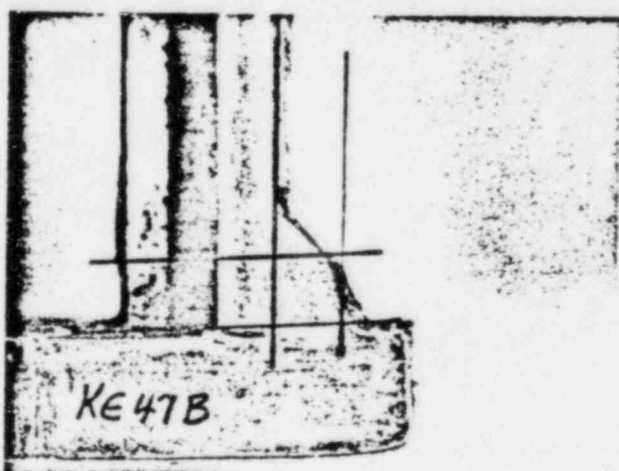
G28

FH104



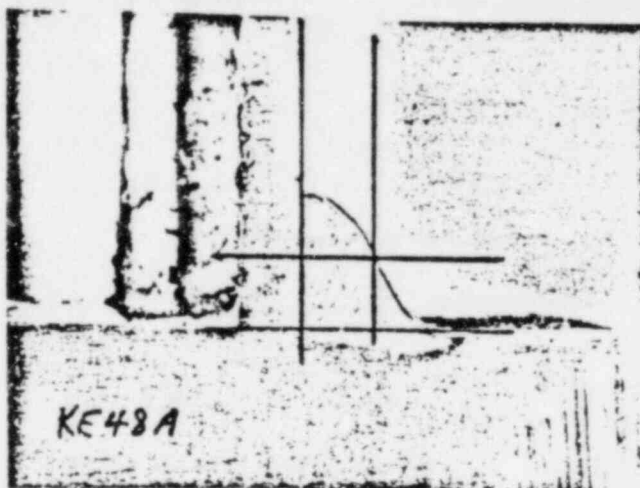
G29

FH105



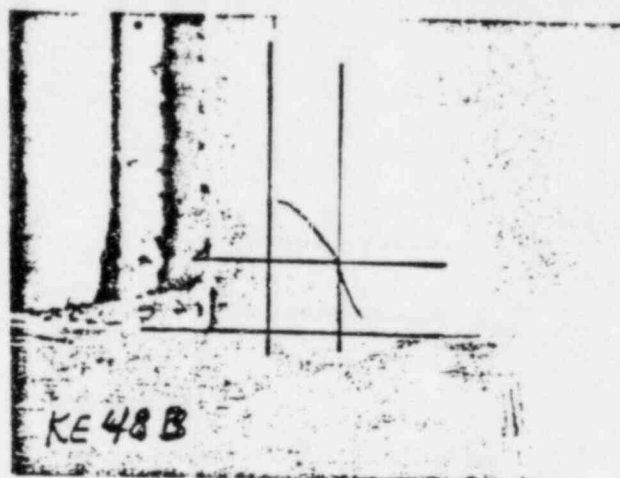
G30

FH106



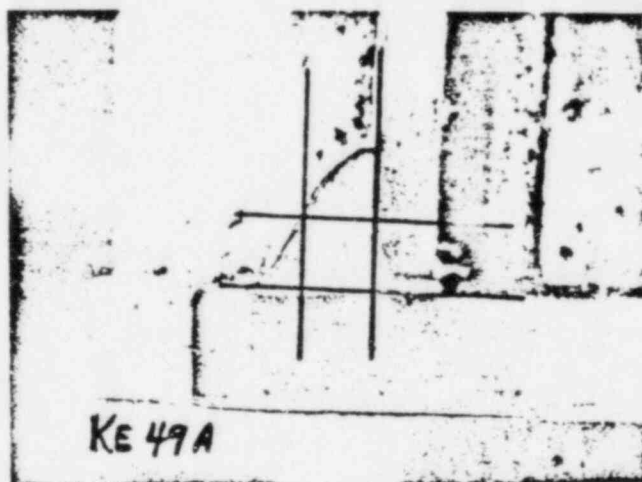
G31

FH107



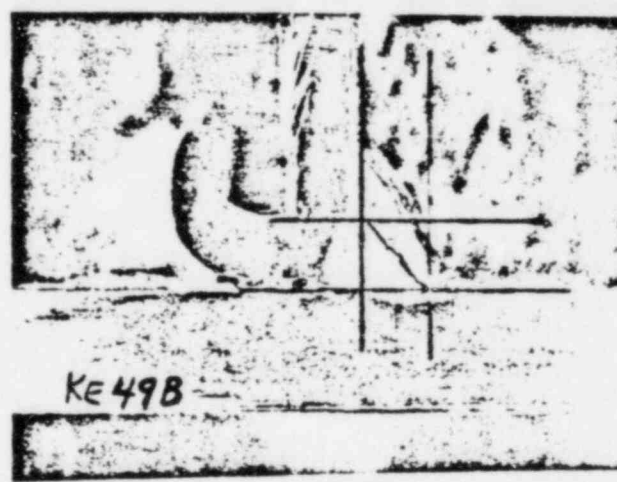
G32

FH108



G33

FH109



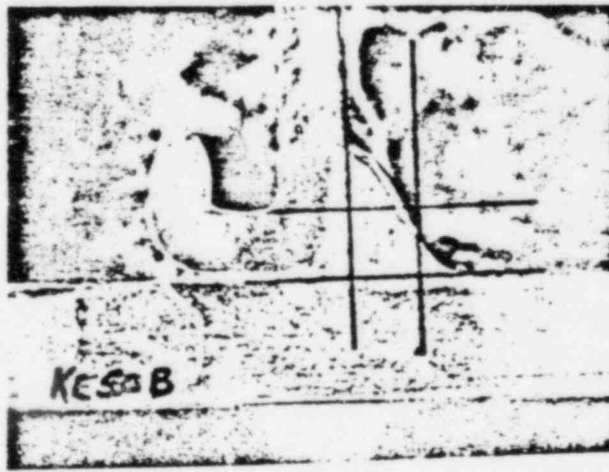
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FH110



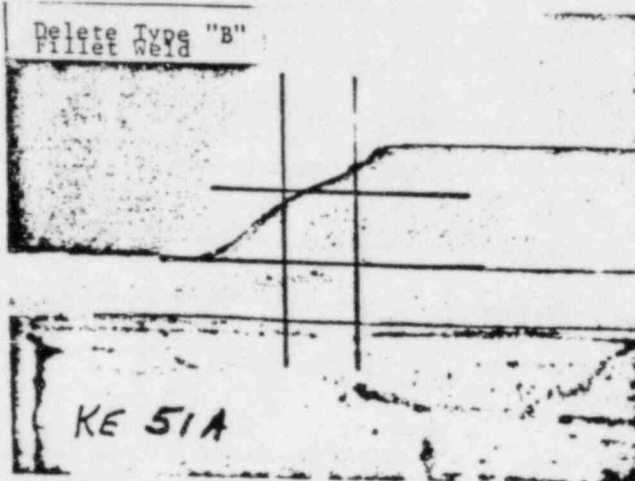
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FH111



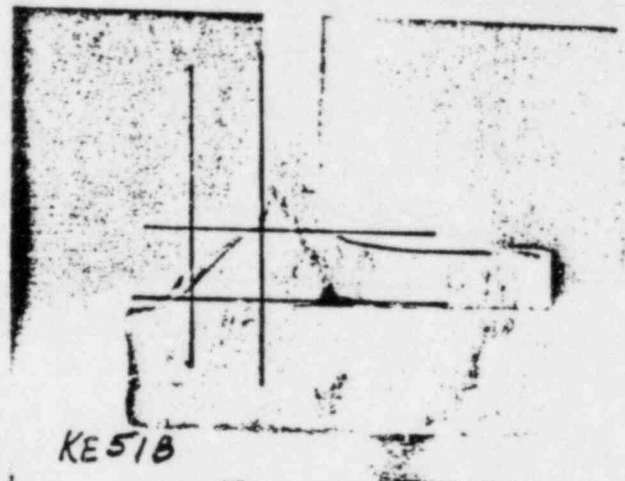
G36

FH112



G37

FH113



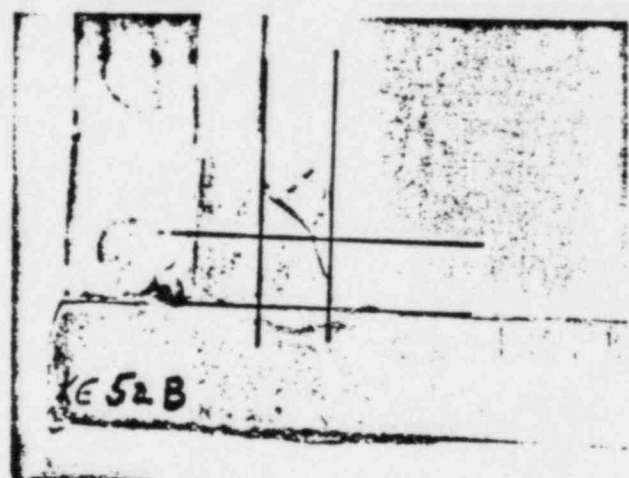
G38

FH114



G39

FH115



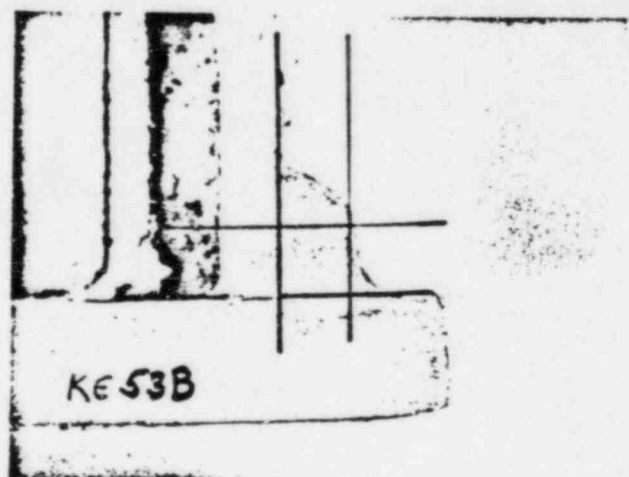
G40

FH116



G41

FH117



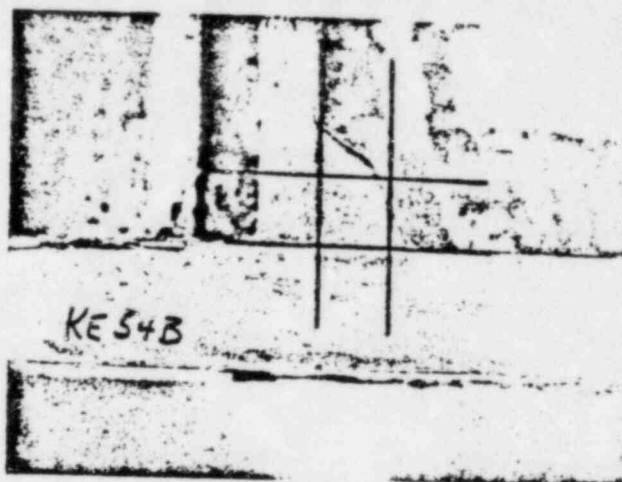
G42

FH118



G43

FH119



G44

FH120



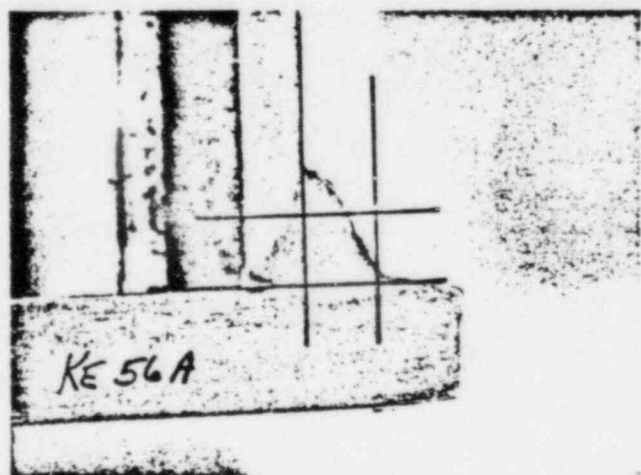
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FH121



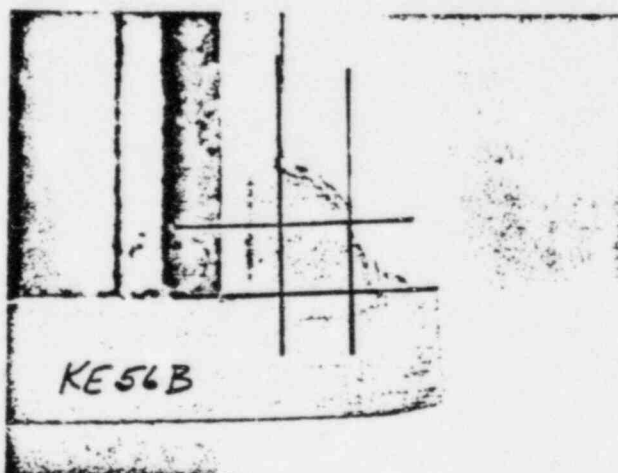
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FH122



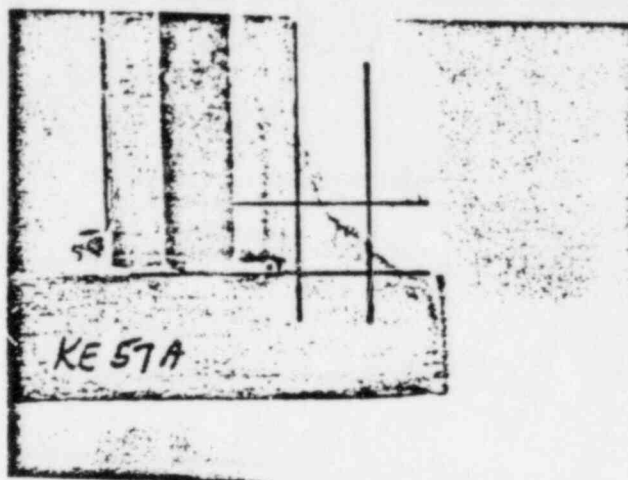
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FH123



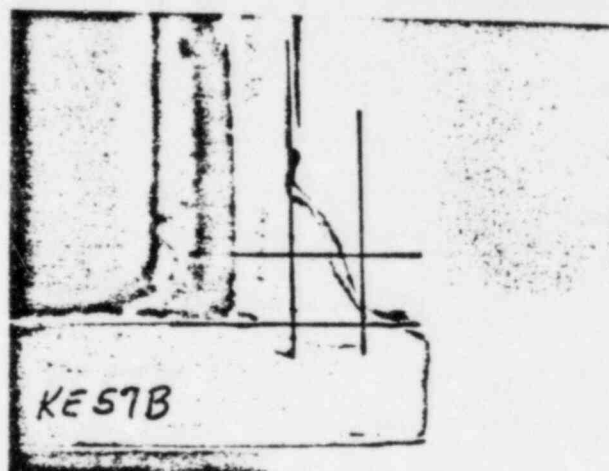
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FH124



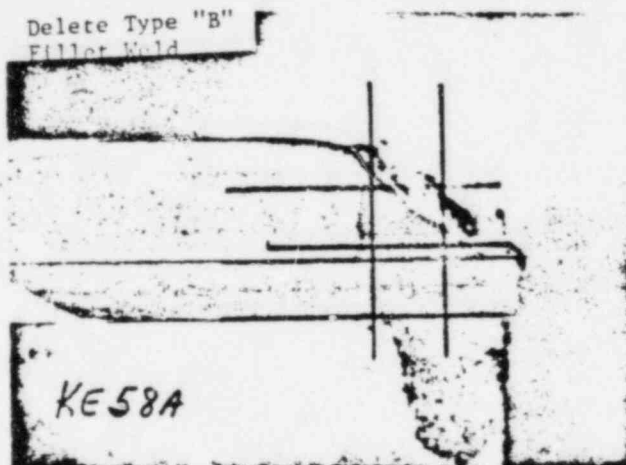
G49

FH125



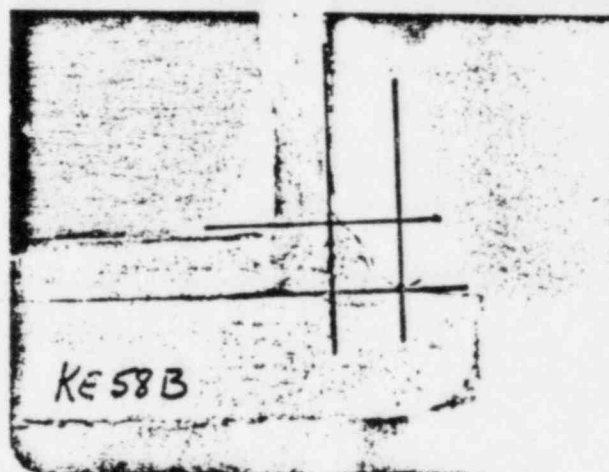
G50

FH126



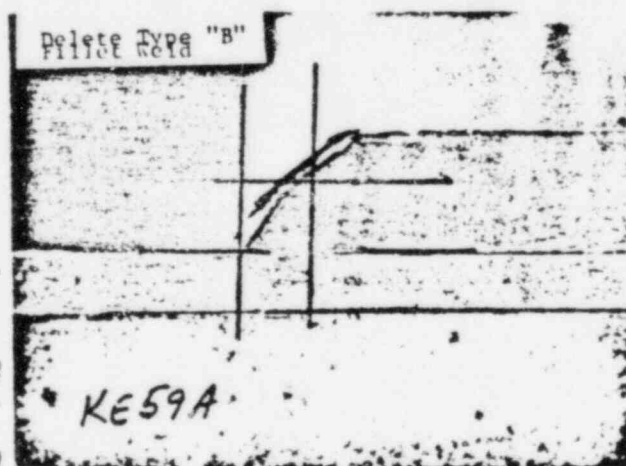
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FH127



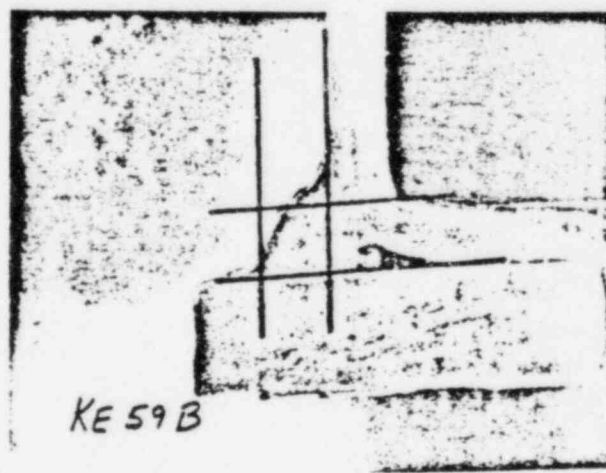
G52

FH128



G53

FH129



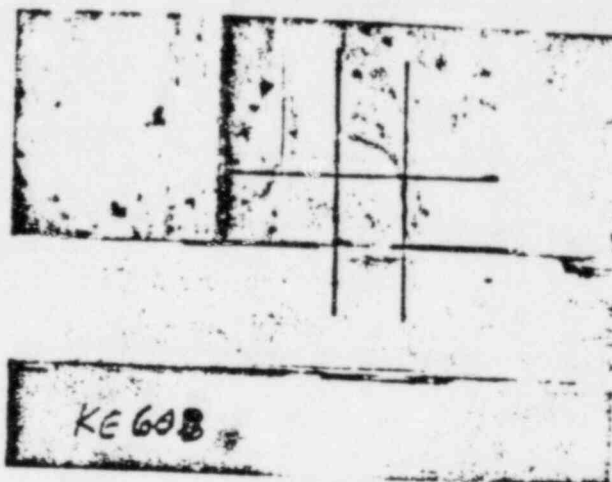
G54

FH130



G55

FH131



G56

FH132



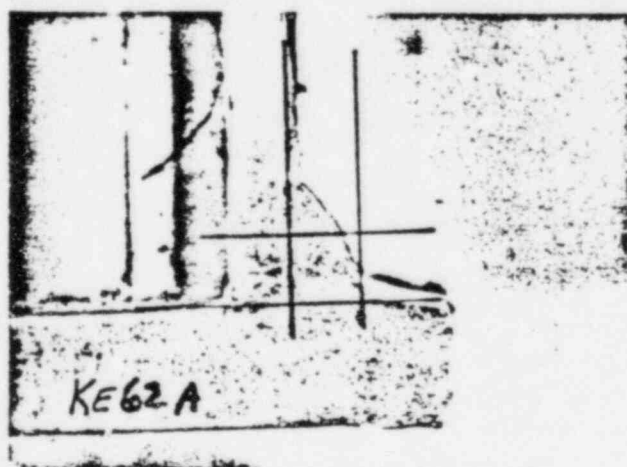
G57

FH133



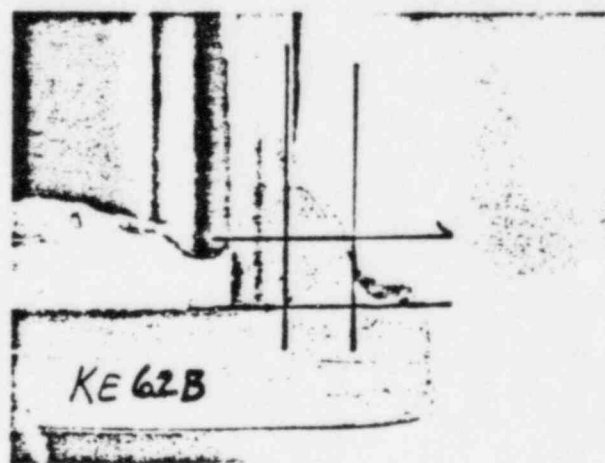
G58

FH134



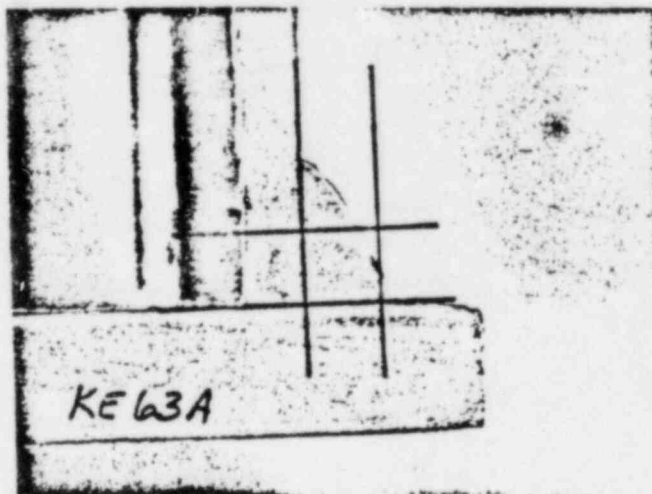
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FH135



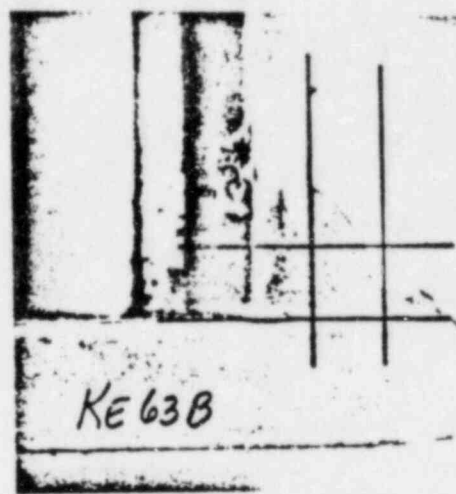
G60

FH136



G61

FH137



G62

FH138



G63

FH139



G64

FH140

[illegible]

[illegible]

[illegible]

[illegible]

9-703

[illegible]

[illegible]

[illegible]

[illegible]

HANGER VARIABLES		40A	40B	41A	41B	42A	42B	43A	43B	44A	44B	44C	44D
FIGURE NUMBER	KEY	89	90	91	92	93	94	95	96	97	98	99	100
MACRO- PHOTOGRAPH No		V	V	V	V	V	V	V	V	V	V	V	V
FILLET LEG LOCATION		V	V	V	V	V	V	V	V	V	V	V	V
FILLET SIZE													
• ACTUAL 1 inch													
• AMOUNT > 1/8 inch													
• % AMOUNT > 1/8 inch													
• FILLET SIZE = 1/8 inch													
• AMOUNT < 1/8 inch													
• % AMOUNT < 1/8 inch													
MEASURED MIN. DIM. 3X													
FILLET CONTOUR													
• CONCAVE													
• FLAT													
• CONVEX													
WELD BEAD FUSION													
• SATISFACTORY													
• UNSATISFACTORY													
WELD BEAD PENETRATION													
> ROOT													
= ROOT													
< ROOT													
WELD DEFECTS AT MACRO-SECTION SURFACE													
• NONE													
• CRACK													
• POROSITY													
OVERALL EVALUATION OF WELD BEAD MACROSECTION													
• ACCEPTABLE													
• BORDERLINE													
• REJECT													
QC INSPECTION													
• ACCEPT													
• REJECT													
• REMARK													

[illegible]

HANGER VARIABLES	KEY#	63A	63B	64A	64B
FIGURE NUMBER					
MAGNETIC PHOTOGRAPH NO.					
FILLET LEG LOCATION					
FILLET SIZE					
• ACTUAL . inch					
• AMOUNT > 1/8 inch					
• AMOUNT > 1/8 inch					
• FILLET SIZE = 1/8 inch					
• AMOUNT < 1/8 inch					
• AMOUNT < 1/8 inch					
MEASURED MIN. DIA. Ø 3 X					
FILLET CONTOUR					
• CONCAVE					
• FLAT					
• CONVEX					
WELD BEAD FUSION					
• SATISFACTORY					
• UNSATISFACTORY					
WELD BEAD PENETRATION					
> ROOT					
= ROOT					
< ROOT					
WELD DEFECTS AT MACRO-SECTION SURFACE					
• NONE					
• CRACK					
• POROSITY					
OVERALL EVALUATION OF WELD BEAD MACROSECTION					
• ACCEPTABLE					
• BORDERLINE					
• REJECT					
QC INSPECTION					
• ACCEPT					
• REJECT					
REMARK					

HANGER VARIABLES	MESH	45A	45B	46A	46D	47A	47B	48A	48B	49A	49B	50A	50B
FIGURE NUMBER													
MACRO- PHOTOGRAPH No.													
FILLET LEG LOCATION													
V	H	101	V	H	102	V	H	103	V	H	104	V	H
V	H	105	V	H	106	V	H	107	V	H	109	V	H
V	H	110	V	H	111	V	H	112	V	H	113	V	H
Fillet Size													
• ACTUAL . inch													
• AMOUNT > 1/8 inch													
• AMOUNT = 1/8 inch													
• FILLET SIZE = 1/8 inch													
• AMOUNT < 1/8 inch													
• AMOUNT < 1/8 inch													
MEASURED MIN. DIM. @ X													
Fillet Contour													
• CONCAVE													
• FLAT													
• CONVEX													
WELD BEAD FUSION													
• SATISFACTORY													
• UNSATISFACTORY													
WELD BEAD PENETRATION													
> ROOT													
= ROOT													
< ROOT													
WELD DEFECTS AT MACRO-SECTION SURFACE													
• NONE													
• CRACK													
• POROSITY													
OVERALL EVALUATION OF WELD BEAD MACROSECTION													
• ACCEPTABLE													
• BORDERLINE													
• REJECT													
QC INSPECTION													
• ACCEPT													
• REJECT													
• REMARK													

[illegible]

INTER-DEPARTMENT CORRESPONDENCE

A20

TO: Mr. H. R. Sager

DATE: October 21, 1981
81-378

FROM: S. C. Swain

SUBJECT: Response to NRC Questions

ATTACHMENTS: 1) Daily Force Report
2) Code 2 Punchlist Items

Per your request, the following information is provided in response to NRC questions:

- 1) See Attachment 1, Daily Force Report, for manpower on site
- 2) Major Work Activities Presently in Progress:

- Pipe Support Installation
 - Process
 - Instrumentation
- Drywell Steel Rework
- Suppression Pool
 - 520' Steel
 - Downcomer Bracing
 - MSRV Piping
 - Non-MSRV Piping
- Masonry Wall Fixes (Seismic Columns)
- Engineering Change Requests
- TMI Activities
 - Technical Support Center
 - Power Center
 - Computer Center
- Galleries
- Miscellaneous Steel (Pipe Chases)
- Piping for Flexibility
- HVAC Supports
- Instrument Rack Modifications

3) Major Work Activities in the Future:

- Special Coatings
- Painting
- QCP Work
- Hardy Doors
- Insulation
 - Fire Barriers
 - Mirror Insulation
 - Fire Seals
 - Kaowool Installation
- Post Accident Monitoring System
- Control Room Modifications
- TIP System Installation
- Containment Inerting System
- SRV Testing Equipment
- Reinstallation of Systems
 - removed for drywell
 - steel or suppression
 - pool steel (Drywell
 - Pneumatic, Containment
 - Monitoring, Leak Detection,
 - etc.)

- 4) The cost estimate for actions as a result of the IAL/QCP are presently approximately for sixty million dollars. This number is based on a delay of the overall project schedule of four months, with carrying charges of fifteen million dollars per month, since April 8, 1981 which is two-thirds of the duration April to July. This number is further substantiated by production rates of steel installation, HVAC supports, and pipe supports prior to the IAL and after the IAL. Also note that further delays and costs are anticipated, mainly due to the job slowdown due to the dual inspection and actual work by contractors on QCP activities.
- 5) Please find attached a copy of Code 2 punchlist items.



S. C. Swain
Site Construction Manager

SCS:dw

cc: B. K. Culver

INC.

NOJ

BE
A-4HENRY J. KAISER, CO.
WM. H. ZIMMER POWER STATIONNONCONFORMANCE REPORT
NO. E-3143 PAGE 1 OF 25

1. DWG/INSTALLATION NO.: <u>E-162 E-170</u>	2. DWG/INSTALLATION NAME: <u>ELECTRICAL INSTALLATION</u>	3. PO/CONTRACT NO.: <u>7070</u>	4. SUPPLIER/CONTRACTOR NAME: <u>FEC</u>
5. INSPECTION PLAN NO.:	6. INSPECTOR: <u>C. NEWCOMB</u>	7. DATE: <u>4-1-81</u>	8. SPECIFICATION NO.: <u>H-2173</u>
		ASME YES ☐ NO ☒	

3. DESCRIPTION OF NONCONFORMANCE	10. DISPOSITION	11. DISPOSITION INSTRUCTIONS/JUSTIFICATION
----------------------------------	-----------------	--

LOCATION: <u>AUX BLDG</u> <u>ENV 510'</u> <u>CABLE BUS</u> <u>SYSTEM FITS & HANGERS</u>	ACCEPT AS IS	① LADDER TRAY WAS USED IN PLACE OF CABLE BUS SO THAT CABLES COULD FLY TO SWITCH GEAR CASE TRAY SIDERAILS. SEE DETAIL AND DWG. CHANGES ON PAGE 3.
REQUIREMENT: <u>QACMIG-14</u> <u>REV 3 REQUIREMENT PAGE 5</u> <u>SEE SR-2807</u>		

DEFICIENCY:	ACCEPT AS IS	
1) LADDER BOTTOM TRAY @ 6'-11" W OF G LINE IS INDICATED ON E-162 AS BUS		RELOCATED 2'-9" NORTH FOR CLEARANCE TO HIGH VOLTAGE CABLES WHICH EXIT THE TRAY AT THAT POINT.
2) THE LAST HANGER (H12H6) ON SAME TRAY IS INDICATED ON E-162 AS BEING 8'-7" H. OF E-17 A HANGER AT THIS LOCATION HAS BEEN REMOVED	REPAIR	SEE DETAIL #2, PAGE 4 FOR REPAIRS TO SIDE-RAIL FLANGE.
3) TRAY AT THIS POINT HAS BEEN		

12. REVIEW BOARD (REQUIRED ON ALL ACCEPT/REPAIR DISPOSITIONS)

Edmund J. Karl 4/2/81
KEI CONSTRUCTION ENGR. DATE

S&L	DATE	CG&E SPONSOR ENGR DATE	CG&E Q.A.&S. DATE	KEI QAE	DATE
-----	------	------------------------	-------------------	---------	------

13. REPAIR/REWORK COMPLETE AND ACCEPTABLE

INSPECTOR/ENGINEER DATE

14. CAUSE

IT WAS THOUGHT THAT THIS INSTALLATION HAD BEEN DOCUMENTED BUT NO DDC CAN BE FOUND.

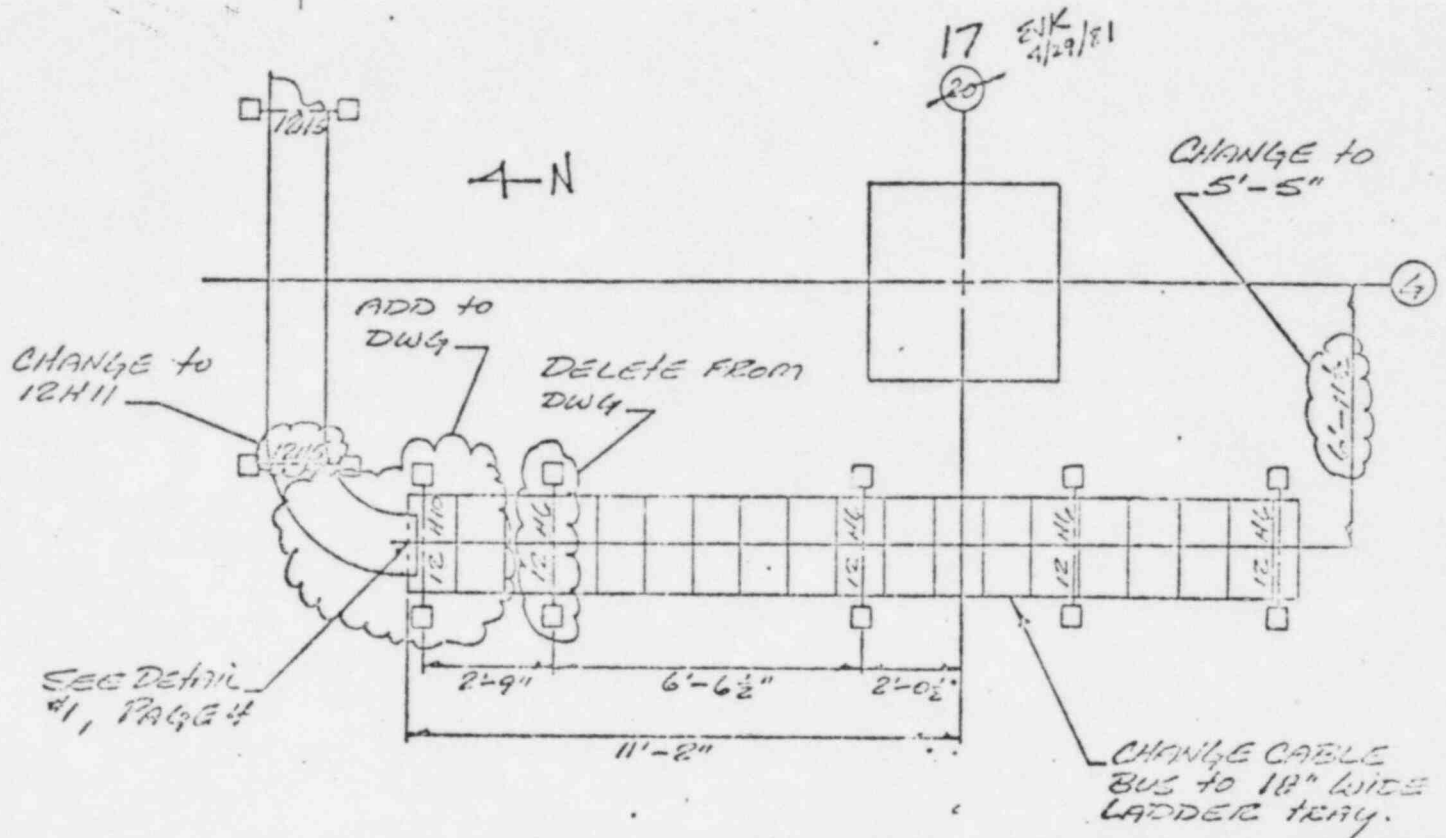
15. CORRECTIVE ACTION

SEL TO MAKE DWG CHANGES AS SHOWN. NO FURTHER CORRECTIVE ACTION NECESSARY.

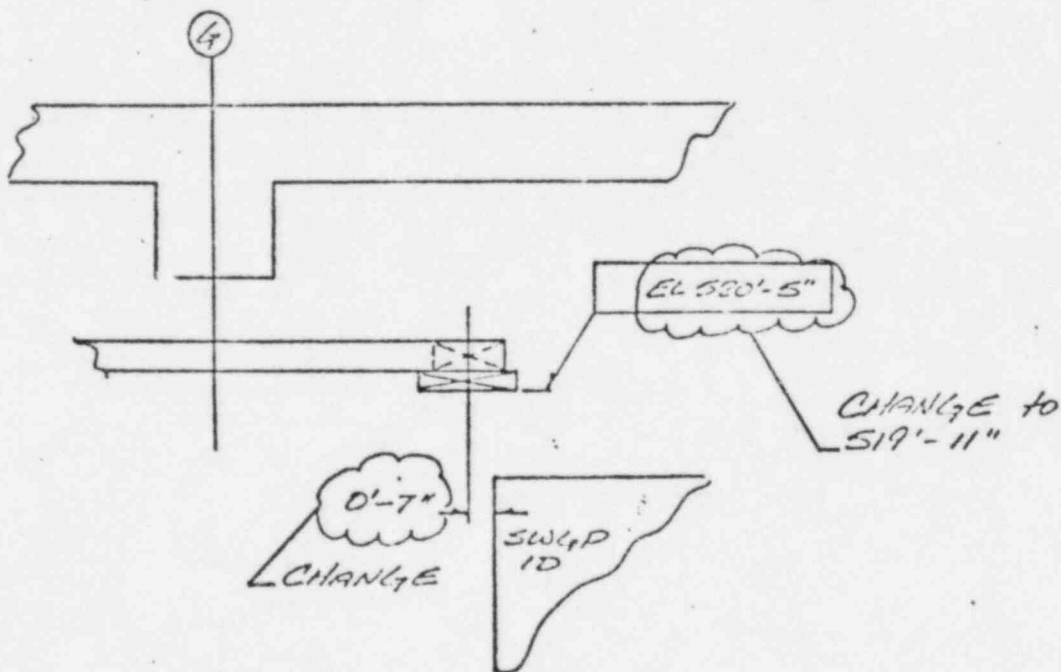
9. Description of Nonconformance	10. Disposition	11. Disposition Instructions & Justification
DAMAGED APPARENTLY FROM REMOVAL OF HANGER		
3) AT THIS POINT TROY CHANGES TO BUS VIA A 90° FITTING NOT SHOWN ON DRAWING	ACCEPT F.B.T.S.	SEE DETAIL OF THIS INSTALLATION ON PAGE 3, top.
4) A HANGER HAS BEEN ADDED APPROXIMATELY 3' FROM THE REMOVED HANGER (12H11.)	ACCEPT F.B.T.S.	THE NORTHERN MOST 12H6 HANGER WAS RELOCATED 2'-9" NORTH. SEE PAGE 3 FOR LOCATION & DETAIL. OPPOSITE FOOT CONNECTIONS FOR THIS HANGER WERE ATTACHED TO SURFACE PLATES RATHER RATHER THAN EMBEDDED PLATES THEREFORE, CHANGE THE DESIGNATION FOR THIS HANGER FROM 12H6 TO 12H10.
		TWO OF THE 12H5 HGRS. HAVE OPPOSITE FOOT CONNECTIONS ATTACHED TO A SURFACE PLATE. THEREFORE, CHANGE THE DESIGNATION FOR ONE OF THESE HANGERS AS SHOWN ON PAGE 5 THE REMAINING 12H5 HGR IS CONFIGURED IN THE FIELD SAME AS 1H3. THEREFORE, CHANGE ITS DESIGNATION TO 1H3 AND CHANGE DWG E162 AS SHOWN ON PAGE 5

P. NELSON
 4-29-81

CHANGE DWG E-162 AS SHOWN. LADDER TRAY CONTAINS CABLES
 114, 115, 116 FROM CABLE BUS AND CABLES RR 153, 154 & 155.



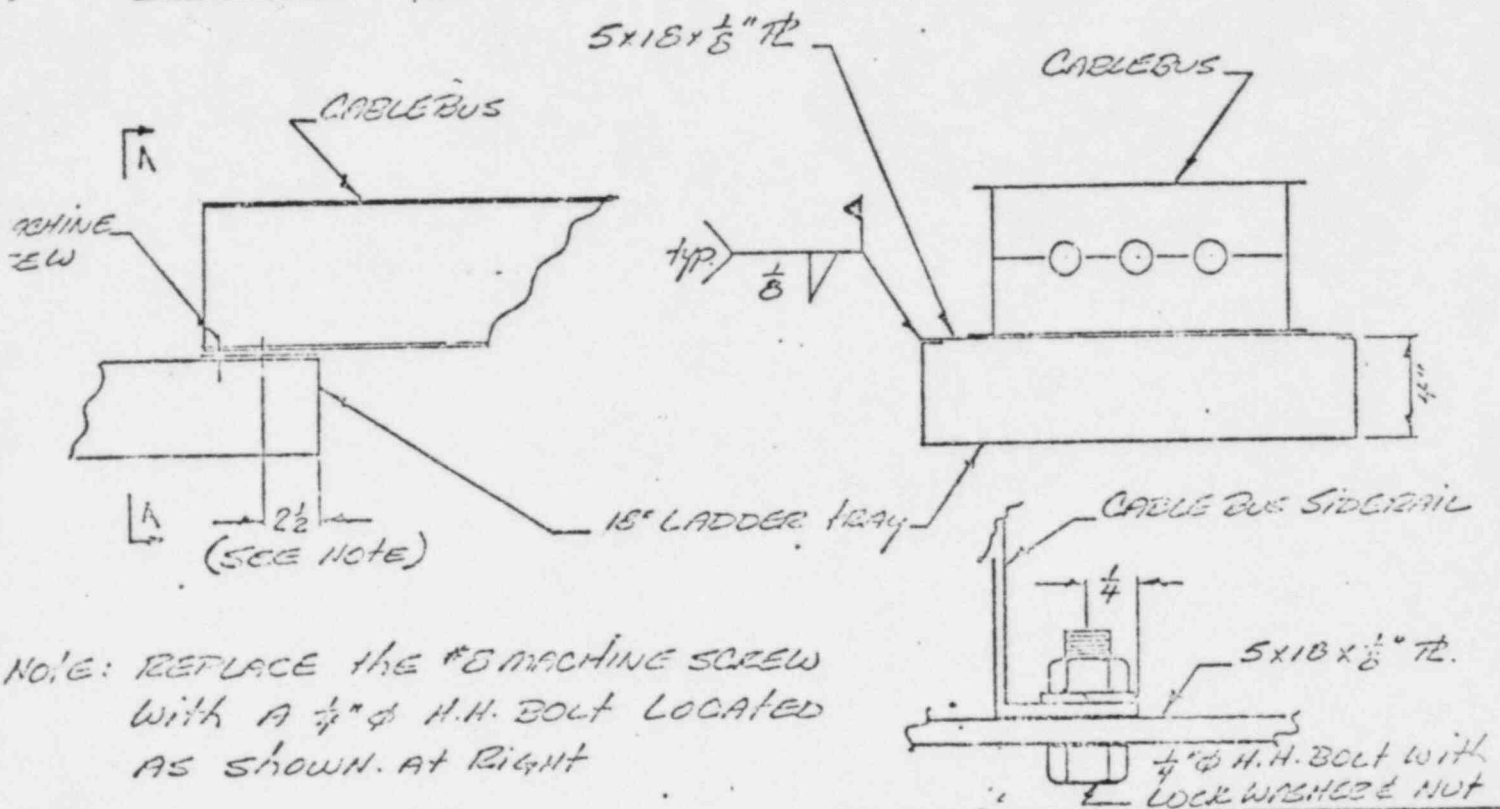
CHANGE DWG E-166 SEC RF AS SHOWN



DETAIL #1: CABLEBUS IS ATTACHED TO THE LADDER TRAY AS SHOWN.

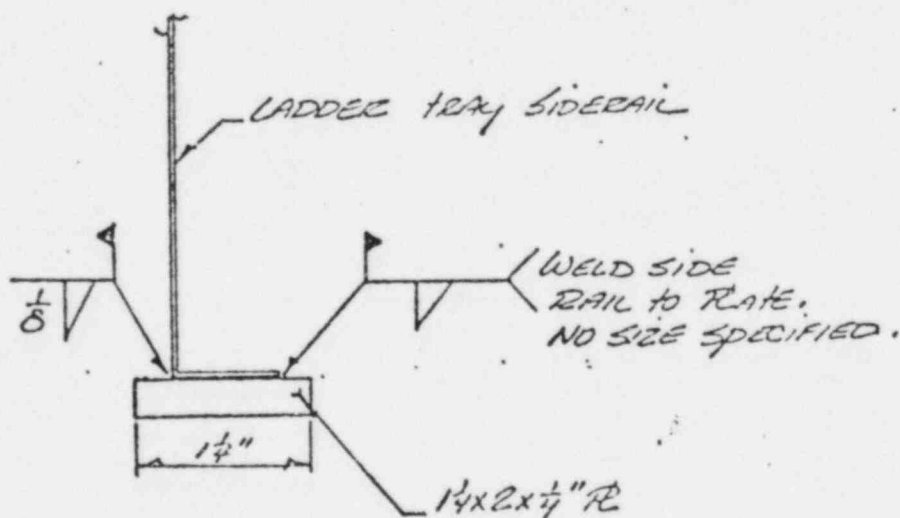
ELEVATION VIEW

SEC A-A



NOTE: REPLACE THE #8 MACHINE SCREW WITH A $\frac{1}{4}$ " ϕ H.H. BOLT LOCATED AS SHOWN. AT RIGHT

DETAIL #2: REPAIR THE DAMAGED SIDE RAIL FLANGE BY ADDING THE PLATE SHOWN BELOW. PLATE CENTERED ON BURNED THRU AREA.



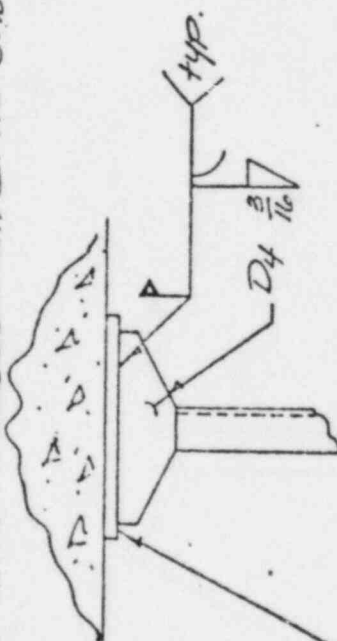
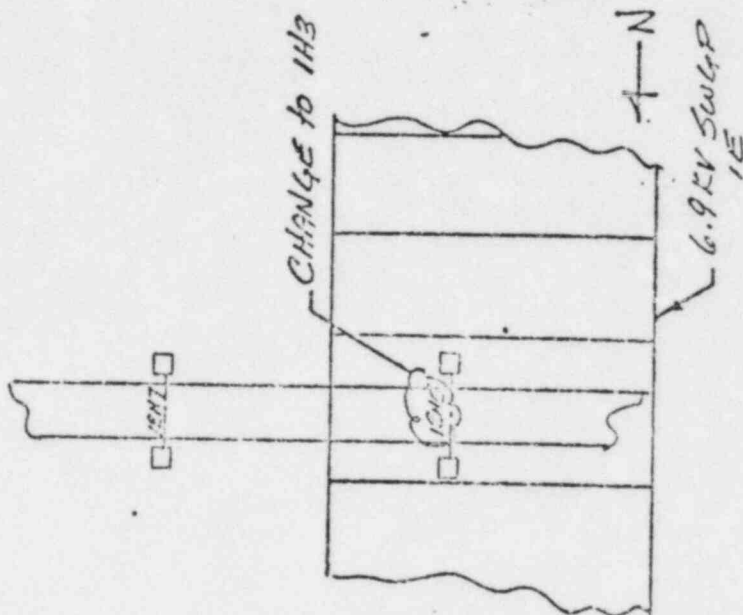
E-162 H

Connections

ALL OTHER DATA SAME
05 1245

CHANGE DWG E-162 AS SHOWN.

* THE FOOT CONNECTION IS ATTACHED TO A SURFACE PLATE RATHER THAN AN EMBEDDED PLATE. AS SHOWN.



9x9x $\frac{1}{2}$ " PL ATTACHED WITH
FOUR $\frac{1}{2}$ " ϕ WEDGES AND NUTS

1. Hanger 141

2. C.I.P. Number E-162-003
Revision 2

3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision H

4. Scope/Location 510' S. Ave.

5. DDC's and N.R.'s _____

6. Prepared by _____ Date MAR 30 1981

7. Reviewed by Lead Inspector _____ Date MAR 30 1981

8. QACMI Reference	9. Description of Activity	10. MOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	R	MAR 30 1981	
4.1.2.1	General Configuration	V	MAR 30 1981	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	MAR 30 1981	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	MAR 30 1981	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>QARI-126</u> Due Date <u>4-6-81</u>	M	MAR 30 1981	
4.1.6	Field Welds	V	MAR 30 1981	
4.1.7	Galvanize	V	MAR 30 1981	

13. Remarks: _____

HANGER NO. _____

14	W	M	A	J	K	L	EL.Z	Z	Z	Z	Z	Z	Z
REQUIRED	4"		18"	8 3/8"	12"								
ACTUAL	✓		✓	✓	✓								

MAR 30 1981



CONNECTION DETAILS

15

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
D/L	D/L	D/L	D/L	D	D	D	D	D	D	D	D	D	D	D	D	D	

MAR 30 1981



16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED	P1000	P1000	P1000
ACTUAL	✓	✓	✓

MAR 30 1981



17. Reviewed for completeness, correctness, and approved for filing
by
QAE _____ Date _____

1. Hanger 141
2. C.I.P. Number E-162-004
Revision 2
3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision 14
4. Scope/Location 510' S. Ave.
5. DDC's and N.R.'s _____

6. Prepared by KEI Date MAR 30 1981

7. Reviewed by Lead Inspector 121 Date MAR 30 1981

8. QACMI Reference	9. Description of Activity	10. MOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	R	MAR 30 1981 KEI QA 121	
4.1.2.1	General Configuration	V	MAR 30 1981 KEI QA 121	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	MAR 30 1981 KEI QA 121	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	MAR 30 1981 KEI QA 121	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>Q19RI-126</u> Due Date <u>4-6-81</u>	M	MAR 30 1981 KEI QA 121	
4.1.6	Field Welds	V	MAR 30 1981 KEI QA 121	
4.1.7	Galvanize	V	MAR 30 1981 KEI QA 121	

13. Remarks: _____

HANGER NO. _____

14	W	H	A	J	K	L	EL. Z	Z	Z	Z	Z	Z
REQUIRED	11"		18"	8 3/8"	10"							
ACTUAL	✓		✓	✓	✓							

MAR 30 1981



CONNECTION DETAILS

15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	D/L	D/L	D/L	D/L	D	D	D	D	D	D	D	D	D	D	D	D	D

MAR 30 1981



16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED	P1000	P1000	P1000
ACTUAL	✓	✓	✓

MAR 30 1981



17. Reviewed for completeness, correctness, and approved for filing
by _____ Date _____
QAE

1. Hanger 141

2. C.I.P. Number E-162-005
Revision 2

3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision 44

4. Scope/Location 510' S. Aux.

5. DDC's and N.R.'s

6. Prepared by

Date

MAR 30 1981

7. Reviewed by Lead Inspector

Date

MAR 30 1981

8. QACNI Reference	9. Description of Activity	10. MOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	R	MAR 30 1981 KEI CA 121	
4.1.2.1	General Configuration	V	MAR 30 1981 KEI CA 121	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	MAR 30 1981 KEI CA 121	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	MAR 30 1981 KEI CA 121	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>8ART-126</u> Due Date <u>4-6-81</u>	M	MAR 30 1981 KEI CA 121	
4.1.6	Field Welds	V	MAR 30 1981 KEI CA 121	
4.1.7	Galvanize	V	MAR 30 1981 KEI CA 121	

13. Remarks:

HANGER NO. _____

14	W	H	A	J	K	L	EL.Z	Z	Z	Z	Z	Z	Z
REQUIRED	4"		18"	53/8"	10"								
ACTUAL	✓		✓	✓	✓								

MAR 30 1981



CONNECTION DETAILS

15

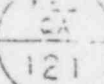
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
D/4	D/4	D/9	D/4	D	D	D	D	D	D	D	D	D	D	D	D	D

MAR 30 1981



16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED	P1000	P1000	P1000
ACTUAL	✓	✓	✓

MAR 30 1981



17. Reviewed for completeness, correctness, and approved for filing
by _____ Date _____
QAE _____

[Faint handwritten signature]

1. Hanger 141
2. C.I.P. Number E-162-003
Revision 2
3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision 4
4. Scope/Location 510' S. Aux.

5. DDC's and H.R.'s _____

6. Prepared by _____

Date

MAR 30 1981

7. Reviewed by Lead Inspector _____

Date

MAR 30 1981

8. QACM1 Reference	9. Description of Activity	10. KOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	K	<u>MAR 30 1981</u>	
4.1.2.1	General Configuration	V	<u>MAR 30 1981</u>	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	<u>MAR 30 1981</u>	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	<u>MAR 30 1981</u>	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>QARI-126</u> Due Date <u>4-6-81</u>	M	<u>MAR 30 1981</u>	
4.1.6	Field Welds	V	<u>MAR 30 1981</u>	
4.1.7	Galvanize	V	<u>MAR 30 1981</u>	

13. Remarks: _____

HANGER NO. _____

14	W	M	A	J	K	L	EL.Z	Z	Z	Z	Z	Z
REQUIRED	4"		18"	8 3/8"	10"							
ACTUAL	✓		✓	✓	✓							

MAR 30 1981



CONNECTION DETAILS

15

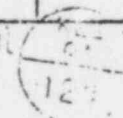
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
D 1/4	D 1/4	D 1/4	D 1/4	D	D	D	D	D	D	D	D	D	D	D	D	D

MAR 30 1981



16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED	P1000	P1000	P1000
ACTUAL	✓	✓	✓

MAR 30 1981



17. Reviewed for completeness, correctness, and approved for filing
by _____ Date _____

1. Hanger 1H1
2. C.I.P. Number E-162-007
Revision 2
3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision X
4. Scope/Location 510' S. Ave.
5. DDC's and N.R.'s _____
6. Prepared by 121 Date MAR 30 1981
7. Reviewed by Lead Inspector 121 Date MAR 30 1981

8. QACMI Reference	9. Description of Activity	10. KOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	K	MAR 30 1981 121	
4.1.2.1	General Configuration	V	MAR 30 1981 121	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	MAR 30 1981 121	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	MAR 30 1981 121	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>QART-126</u> Due Date <u>4-6-81</u>	M	MAR 30 1981 121	
4.1.6	Field Welds	V	MAR 30 1981 121	
4.1.7	Galvanize	V	MAR 30 1981 121	

13. Remarks: _____

HANGER NO. _____

14	W	H	A	J	K	L	EL.Z	Z	Z	Z	Z	Z	Z
REQUIRED	4"		18"	8 ³ / ₈ "	10"								
ACTUAL	✓		✓	✓	✓								

MAR 30 1981



CONNECTION DETAILS

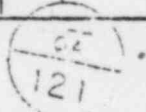
15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	D1	D1	D1	D1	D	D	D	D	D	D	D	D	D	D	D	D	D	

MAR 30 1981



16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED	P1000	P1000	P1000
ACTUAL	✓	✓	✓

MAR 30 1981



17. Reviewed for completeness, correctness, and approved for filing
by _____ Date _____
QAE

COPY

1. Hanger 141
2. C.I.P. Number E-162-008
Revision 2
3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision 1
4. Scope/Location 510' S. Aux.
5. DDC's and N.R.'s _____

6. Prepared by qh Date MAR 30 1981

7. Reviewed by Lead Inspector qh Date MAR 30 1981

8. QACMI Reference	9. Description of Activity	10. MOI	11. Accept and Date	12. Reject a Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	R	<u>MAR 30 1981</u> VET QA 121	
4.1.2.1	General Configuration	V	<u>MAR 30 1981</u> VET QA 121	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	<u>MAR 30 1981</u> VET QA 121	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	<u>MAR 30 1981</u> VET QA 121	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>QARI-126</u> Due Date <u>4-6-81</u>	M	<u>MAR 30 1981</u> VET QA 121	
4.1.6	Field Welds	V	<u>MAR 30 1981</u> VET QA 121	
4.1.7	Galvanize	V	<u>MAR 30 1981</u> VET QA 121	

13. Remarks: _____

HANGER NO. _____

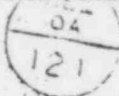
14	W	H	A	J	K	L	EL.Z	Z	Z	Z	Z	Z	Z
REQUIRED	4"		18"	8 3/8"	12"								
ACTUAL			✓	✓	✓								



CONNECTION DETAILS

15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D

MAR 30 1981



16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED	P1000	P1000	P1000
ACTUAL	✓	✓	✓

MAR 30 1981



17. Reviewed for completeness, correctness, and approved for filing
by _____ Date _____
QAE

COPY

1. Hanger LDPHK3 MAR 30 1981

2. C.I.P. Number E-162-075
Revision 2

3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision N

4. Scope/Location 510' S. Aux.

5. DDC's and N.R.'s _____

6. Prepared by [Signature] Date MAR 30 1981

7. Reviewed by Lead Inspector [Signature] Date MAR 30 1981

8. QACMI Reference	9. Description of Activity	10. MOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	R	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	
4.1.2.1	General Configuration	V	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>QARI-126</u> Due Date <u>4-6-81</u>	M	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	
4.1.6	Field Welds	V	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	
4.1.7	Galvanize <u>CC</u>	V	<u>MAR 30 1981</u> [Stamp: KEI QA 121]	

13. Remarks: _____

HANGER NO. _____

14	W	H	A	J	K	L	EL.Z	Z	Z	Z	Z	Z
REQUIRED			1/4"	9"	3"							
ACTUAL			✓	✓	✓							

MAR 30 1991



CONNECTION DETAILS

15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D

16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED			
ACTUAL			

17. Reviewed for completeness, correctness, and approved for filing
by
QAE _____ Date _____

COPY

MAR 30 1981
March 30 1981

1. Hanger 109HV3
2. C.I.P. Number E-162-074
Revision 2

3. C.I.P. For Cable Tray Hangers Drawing Number E-162 Revision W
4. Scope/Location 510' S. Aux

5. DDC's and N.R.'s _____

6. Prepared by KEI QA 121 Date MAR 30 1981

7. Reviewed by Lead Inspector KEI QA 121 Date MAR 30 1981

8. QACMI Reference	9. Description of Activity	10. MOI	11. Accept and Date	12. Reject Date
4.1.1, 4.1.2 2.3	Prerequisites reviewed for DDC's, NR's, Familiarity, correct Approval and Revision Status	R	KEI QA 121 MAR 30 1981	
4.1.2.1	General Configuration	V	MAR 30 1981 KEI QA 121	
4.1.3 4.1.3.1 4.1.3.2 4.1.3.3 4.1.3.4	Elevation, Spacing between hangers, Spacing on embedded Plate and hanger dimensions. (See Exhibit "D")	M	MAR 30 1981 KEI QA 121	
4.1.4 4.1.4.1 4.1.4.2	Connection Detail (See Exhibit "D")	V	MAR 30 1981 KEI QA 121	
4.1.5 4.1.5.1 4.1.5.2 4.1.5.3	Torque - Record Torque Wrench No. <u>QARE-126</u> Due Date <u>4-6-81</u>	M	MAR 30 1981 KEI QA 121	
4.1.6	Field Welds	V	MAR 30 1981 KEI QA 121	
4.1.7	Galvanize	V	MAR 30 1981 KEI QA 121	

13. Remarks: _____

HANGER NO. _____

14	W	H	A	J	K	L	EL.Z	Z	Z	Z	Z	Z	Z
REQUIRED			2 1/2"	9"	9"								
ACTUAL			✓	✓	✓								

MAR 30 1991
 121
 QA

CONNECTION DETAILS

15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	

16	HORIZONTAL TYPE	VERTICAL TYPE	DIAGONAL TYPE
REQUIRED			
ACTUAL			

17. Reviewed for completeness, correctness, and approved for filing
 by QAE _____ Date _____

COPY

A-22

CONSTRUCTION INSPECTION PLAN (Exhibit A) Rev. 1

Rev. AA

Working No. EL-E-17P

MR's/DIC's

Component Name CONDUIT AND NON-ENGINEERED HANGERS

Location To/From Cable Post to Cable Post

Inspection Plan No. 1 of 1

Page 1

Date FEB 14 1981

Prepared By S. Bucke

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1.	Pre-Requisites	REVIEW		FEB 14 1981	Ref. Item 4, C.I.I.P.
2.	Scope (Record on Exhibit B)	RECORD		FEB 14 1981	Ref. Item 5, C.I.I.P.
3.	Conduit Identification	REVIEW		FEB 14 1981	Ref. Item 7.1, C.I.I.P.
4.	Conduit and Electrical Box Installation	VISUAL		FEB 14 1981	Ref. Item 7.2, C.I.I.P.
5.	Torque and Embedded Length	MEASURE		FEB 14 1981	Ref. Item 7.3, C.I.I.P.
6.	Field Welds, SPPH 4.6, Para. 4.6	VISUAL		FEB 14 1981	Ref. Item 7.4, C.I.I.P.

Inspection Plan No. 1 of 1

A-22

APPROVED FOR FILING:

Charles A. Burgess 11/20/79
CGEE QAES

Michael J. Ki... 11-20-79
QUALITY ASSURANCE ENGINEER

PROVED:

Pin... 11-20-79
CONSTRUCTION ENGINEERING

QAE

Para

CONSTRUCTION INSPECTION PLAN (Exhibit A) Rev. 1

Drawing No. EL Rev. 1 Inspection Plan No. 2 of 2
 Component Name CONDUIT AND NON-ENGINEERED HANGERS Page 2
 Location To/From Prepared By Date

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
7. Non-Engineered Hangers		VISUAL	REL BA ET	FEB 14 1981	Ref. Item 7.5, C.I.I.P.
8. Grounding		VISUAL	REL BA ET	FEB 14 1981	Ref. Item 7.6, C.I.I.P.
9. Separation		VISUAL	REL BA ET	FEB 14 1981	Ref. Item 7.7, C.I.I.P.
REMARKS:					
Reason for Rejection:					
1. Item #4	CANNOT locate CONDUIT	SRF 2986	INSPECTION OK	MAR 06 1981	
2.					
3.					
4.					
5.					
6.					
7.					

APPROVED:

APPROVED FOR FILING:

Charles R. Burges 1/20/79
 EGLE QMS

Richard D. Burges 11-20-79
 CONSTRUCTION ENGINEERING

COPY

CONSTRUCTION INSPECTION PLAN (Exhibit B)

Drawing No. EI 191 Rev. AA

Component Name CONDUIT

Building Location SW BLDG

Prepared By

Inspection Plan No.

Page 2 of 9

Date

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
	Record Conduits Listed on Electrical Installation	REVIEW	N/A		Ref. Item 5, C.I.P.
	Drawing:	RECORD			
1"	CW 094			FEB 14 1981	
1"	DM 021				
1"	DM 027				
1"	DM 029				
1"	IA 036				
1"	VH 011				
1"	VH 012				
1"	VH 073				
1"	VH 074				
1"	VH 090				
1"	VH 091				
1"	VH 134				
1"	WS 013			FEB 14 1981	

APPROVED:

Charles A. Burger 11/20/79
CG&E Q&ES

APPROVED FOR FILING:

Michael J. Kopp 11-20-79
CONSTRUCTION ENGINEERING

A-23

Welds that were painted with the stated paint. N/A

HENRY J. KAISER, CO.
WM. H. ZIMMER POWER STATION

NO. E-2466 NONCONFORMANCE REPORT
PAGE 1 OF 3

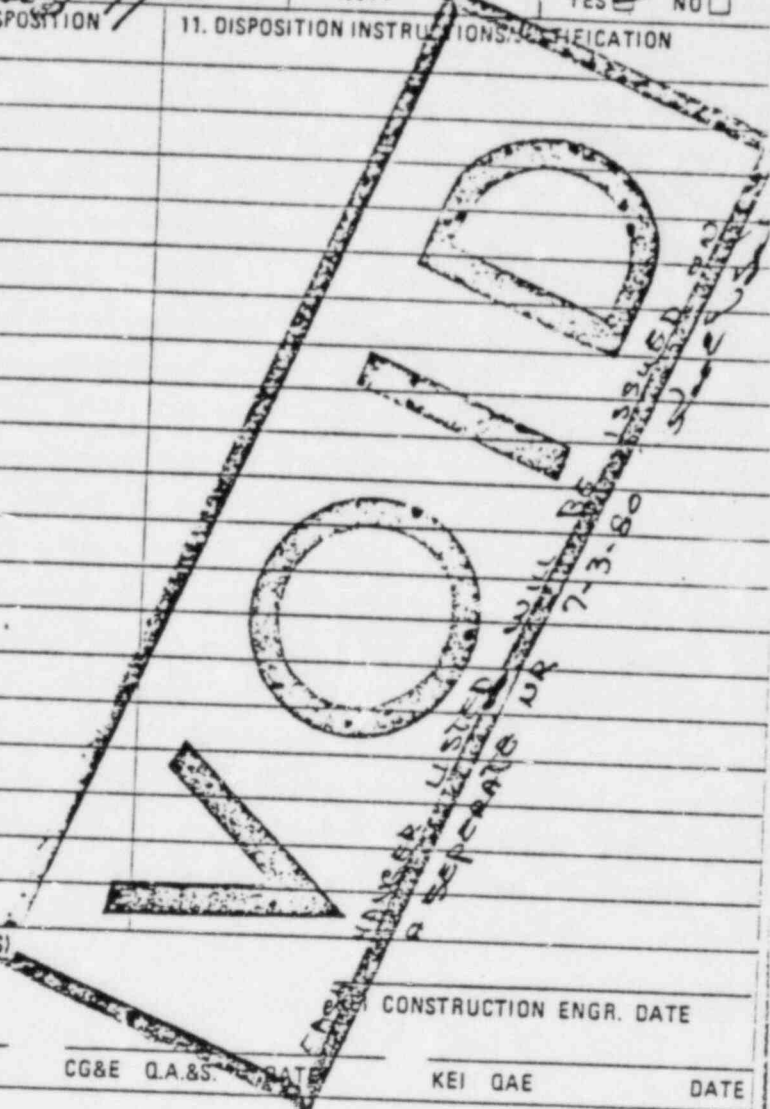
1. DWG/INSTALLATION NO. <u>VARIOUS</u>	2. DWG/INSTALLATION NAME: <u>DG, L/B HANDERS</u>	3. PO/CONTRACT NO. <u>7070</u>	4. SUPPLIER/CONTRACTOR NAME: <u>HJR/CGHE</u>
5. INSPECTION PLAN NO.: <u>VARIOUS</u>	6. INSPECTOR: <u>BELCHER/RAMSEY/RUIZ</u>	7. DATE: <u>1/3/80</u>	8. SPECIFICATION NO. <u>VARIOUS</u>
9. DESCRIPTION OF NONCONFORMANCE			11. DISPOSITION INSTRUCTIONS: YES ☒ NO ☐

SYSTEM & DIESEL GENERATOR (DG)

LOCATION: DIESEL GENERATOR BUILDING 'A,B,C'

REF: QACME-M-12, QACME-M-15, SPMA-4.6, DDC-565-328

CONDITION: THE FOLLOWING PROCESS PIPE HANDERS WERE INSPECTED FOR WELD ACCEPTABILITY AND HILTI BOLT ACCEPTABILITY. DURING THE TIME OF INSPECTION THE PROCEDURES CHANGED REQUIRING ON A SURVEILLANCE BASIS.



12. REVIEW BOARD (REQUIRED ON ALL ACCEPT/REPAIR DISPOSITIONS)		CONSTRUCTION ENGR. DATE	
S&L	DATE	CG&E SPONSOR ENGR DATE	CG&E Q.A.&S. DATE
13. REPAIR/REWORK COMPLETE AND ACCEPTABLE		KEI	QAE

14. CAUSE	INSPECTOR/ENGINEER	DATE
-----------	--------------------	------

15. CORRECTIVE ACTION

A-24

KAISER ENGINEERS, INC. WM. H. ZIMMER POWER STATION		NONCONFORMANCE REPORT NO. <u>E2233</u> PAGE <u>1</u> OF <u>1</u>	
1. DWG/INSTALLATION NO. <u>PSK1WS32</u>	2. DWG/INSTALLATION NAME: <u>SERVICE WATER</u>	3. PO/CONTRACT NO. <u>7070</u>	4. SUPPLIER/CONTRACTOR NAME: <u>HST</u>
5. INSPECTION PLAN NO.: <u>CIP-45</u>	6. INSPECTOR: <u>H. Wood</u> ^{IS. H.}	7. DATE: <u>11-21-79</u>	8. SPECIFICATION NO. ASME <u>H-2256</u> YES ☒ NO ☐
9. DESCRIPTION OF NONCONFORMANCE		10. DISPOSITION	11. DISPOSITION INSTRUCTIONS/JUSTIFICATION
SYS: WS SERVICE WATER 1.6X: Reactor B.H. 6V. 573' REQ: WELDS ARE TO BE INSPECTED PER REQUIREMENTS OF KE-1 form. Cond: WELD WS 62GP WAS WELDED TO COMPLETION WITHOUT EVIDENCE OF FIT-UP INSPECTIONS, WELDER QUALIFICATION, MATERIAL TRACEABILITY, AND A FINAL VISUAL ARE ALL ACCEPTABLE.		REWORK	CUT OUT WELD WS-62GP REWELD USING NEW WELD WS-K-378(GP). NOTE: QC TO VERIFY AND DOCUMENT NEW WELD. (TRACEABLE MAT'L FURNISHED BY KELLOGG) <i>M. Jett</i> 12-21-79
VOID			
12. REVIEW BOARD (REQUIRED ON ALL ACCEPT/REPAIR DISPOSITIONS)			
S&L	DATE	CG&E SPONSOR ENGR DATE	CG&E Q.A.B.S. DATE
N/A		N/A	
		KE-1 FORM CORRECTED <i>[Signature]</i> 12-24-79 KEI CONSTRUCTION ENGR. DATE <i>[Signature]</i> 12-24-79 KEI QAE DATE	
13. REPAIR/REWORK COMPLETE AND ACCEPTABLE			

14. CAUSE

CRAFT DID NOT NOTIFY
QC AT FIT-UP

15. CORRECTIVE ACTION

CRAFT INSTRUCTED
NOT TO BY-PASS
QC HOLD PTS.

N^o 2554

KIMBER ENGINEERS, INC.

Wm. H. ZIMMER NUCLEAR POWER STATION - WELD DATA SHEET

(See reverse side for instructions & responsibilities)

FIELD
Weld No. 62WSGP
CLEAN CLASS D

System or Component SERVICE WATER SYS ISO DWG No. BK1WS32 Line No. IWS17A10 MK# 554 To MK# ---
 Base SA PI To SA PI Nom. Pipe Size NA Nom. Wall Thks. 2 1/2 Fillet Size 3/8" Project Spec. H-2256
 Code S&L C Welding Procedure No. 3.1.8 Special Instructions ---

Filler Material Requirement:

Electrode Type E7018 Bare/Covered --- Size 3/32 HT#/Lot# 421-N3M Size 1/8 HT#/Lot# --- Size 5/32 HT#/Lot# ---
 Consumable Insert NA HT No. --- Backing Ring NA HT# ---
 Purge Req.: I.D. Purge NA CFH --- Torch Purge NA CFH ---

Heat Treat Requirements:

Preheat Temp Req. 60 MIN °F Interpass Temp Req. 60 MIN °F Post Weld Req. NA Procedure ---

CIP WS 45

Fit-Up / Installation / NDE Requirements:

Instructions:	Req.	QA Stamp	Date	AI Hold Pts.	Record/Remarks	Instructions:	Req.	QA Stamp	Date	AI Hold Pts.	Record/Remarks
① Verify, proper weld procedure, welder's qualif., proper filler mat'l., prep. G.T.D.R.	NA					⑪ NDE: FINAL RT/UT	NA				
② Verify proper bevels, details for, cleanliness, damage. Verify Mark No.'s	NA				Record MK No. to MK No. <u>a/H</u>	⑫ Verify welders I.D. on weld joint, (record welder's symbol)					
③ Verify proper fit-up, Insp. tack welds.	NA					⑬ Tack Symbol <u>LBH</u>	⑭ Root Layers Symbol <u>LBH</u>	⑮ Intermediate Layers Symbol <u>LBH</u>			
④ NDE: Examine weld edge preparation surface	MT PT RT Other					⑯ Symbol <u>LBH</u>	⑰ Symbol <u>LBH</u>	⑱ Final Symbol <u>LBH</u>			
⑤ NDE: ROOT PASS (visually examine I.D. surface were accessible)	MT PT RT Other				Verify Preheat Temp	⑲ Verify Ferrite Content, (where applicable)					Record Range <u>---</u>
⑥ NDE: INTERPASS	MT PT Other				Verify Interpass Temp.						
⑦ NDE: FINAL PASS	NA Other	KEI QA 123	11/29/79		VISUAL PER SPPM 4.6.2	⑳ 1st Repair Ref. WRD No. <u>---</u>					
⑧ NDE RT prior PWHT	RT					㉑ 2nd Repair Ref. WRD No. <u>---</u>					
⑨ POST WELD HEAT TREAT Verify Record Time/Temp.					Attach Time/Temp. Recordings	㉒ 3rd Repair Ref. WRD No. <u>---</u>					Note: If 3rd repair is not acceptable, refer to Review Board Action. Attach Copy NR.
⑩ NDE FINAL MT/PT						APPROVALS: <u>11-26-75</u> <u>Welding Eng.</u>					WELD/NDE QA ENGR

2552

KAISER ENGINEERS, INC.

Wm. H. ZIMMER NUCLEAR POWER STATION - WELD DATA SHEET

(See reverse side for instructions & responsibilities)

WVU 11/8/11
 Weld No. 604556
 CIP WS 45

Service WTR. SYS 150 DNG No. BA14532 Line No. 14517A18 MK# 52 To MK# ---

Trade FI To FI Nom. Pipe Size NA Nom. Wall Thk. 1/2 Fillet Size 3/8 Project Spec. 4-2255

QA SAFCO Welding Procedure No. 318 Special Instructions ---

Type E7018 Base Covered --- Size 3/32 HTN/Lot# 421W3111 Size 1/8 HTN/Lot# --- Size 5/32 HTN/Lot# ---

Consumable Inert NA HT No. --- Backing Ring NA HT# ---

Purge Req. ID. Purge NA CFH --- Torch Purge NA CFH ---

Heat Treat Requirements: ---

Preheat Temp Req. 60 MIN Interspace Temp Req. 60 MIN Post Weld Req. NA Procedure CIP WS 45

Fit-Up / Installation / NDE Requirements: ---

Instruction #	Req.	QA Stamp	Date	AI Hold Pts.	Record/Remarks	Instructions:	Req.	QA Stamp	Date	AI Hold Pts.	Record/Remarks
① Verify proper weld procedure, welders qual., proper filler mat'l, pressure & type.	X		5-16-77			⑬ NDE: FINAL RT/UT	NA	NA			
② Verify proper base's, details for cleanliness, damage.	X		5-16-77		Record MK No. 52 to MK No. N/A	⑭ Verify welders I.D. on weld joint. (record welder's symbol)					
③ Verify proper fit up, insp. back welds.	X		5-16-77			⑮ Tack Symbol KZ1	⑮ Root Layers Symbol KZ1			⑮ Intermediate Layers Symbol KZ1	
④ NDE: Examine weld edge penetration surface	MT PT RT Other	NA				⑯	⑯			⑯ Final Symbol	KZ1
⑤ NDE: ROOT PASS (visually examine I.D. surface where accessible)	MT PT RT Other	NA			Verify Preheat Temp = 600°	⑰ Verify Ferrite Content. (where applicable)	NA	NA			Record Range
⑥ NDE: INTERPASS	MT PT Other	NA			Verify Interpass Temp. = 600°						
⑦ NDE: FINAL PASS	MT PT RT Other		5-16-77		VISUAL FEE SPRAY 4-6 P.I.	⑲ 1st Repair Ref. WRD No.					
⑧ NDE: RT prior PWHT	RT	NA				⑳ 2nd Repair Ref. WRD No.					
⑨ POST WELD HEAT TREAT	NA	NA			Attach Time/Temp. Recordings	㉑ 3rd Repair Ref. WRD No.					Note: If 3rd repair is not acceptable, refer to Review Board Action. Attach Copy T.R.
⑩ NDE: FINAL RT/UT	NA	NA				APPROVALS: N. Ouel 11-26-75					

No 2553

KAISER ENGINEERS, INC.

Wm. H. ZIMMER NUCLEAR POWER STATION - WELD DATA SHEET

(See reverse side for instructions & responsibilities)

OPW 11/8/77

Field No. 61 WSGT
CLEAN LINES D

System or Drawing: SERVICE WATER SYS
ISO DWG No. P3K11WS32 No. 115-17H10-A MK# 52
Bar: P1
Nom. Pipe Size: NA
Nom. Wall Thk: 1 1/2
Project Spec: H-225C
Class: SALC
Welding Procedure No. 3-1-B
Special Instructions:

Filler Material Requirements:
Electrode: E7018
Type: E7018
Bore/Concave Size: 3/32
HTH/LOH: 1/8
Size: 5/32
HTH/LOH: 1/8
Consumable Insert: NA
Backg. Ring: NA
Purge Rq.: I.D. Purge: NA
Torch Purge: NA
CFH: CFH

Heat Treat Requirements:
Preheat Temp Req: 60° F
Interpass Temp Req: 60° F
Post Weld Req: NA
Procedure: NA

Fit-Up / Installation / NDE Requirements:

Instructions:	Req.	QA Stamp	Date	AI Hold Pts	Record/Remarks	Instructions:	Req.	QA Stamp	Date	AI Hold Pts	Record/Remarks
① Verify, proper weld procedure, welders qual, proper filler mat'l, prep work.	X	NA	5-11-77		FINAL RT/UT	① NDE:	NA	NA			
② Verify proper bevels, details for cleanliness, damage.	X	NA	5-11-77		Record MK No. to MK No. NA	② Verify welders I.D. on weld joint. (record welder's symbol)					
③ Verify proper fit-up, insp. tack welds.	X	NA	5-11-77		③ Tack	③ Tack					
④ NDE: Examine weld edge preparation surface	MT PT RT Other	NA			Symbol LBL	④ Root Layers	Symbol LBL				
⑤ NDE: ROOT PASS (usually examine I.D. surface where accessible)	MT PT RT Other	NA			⑤ Verify Preheat Temp > 60°	⑤ Intermediate Layers	Symbol LBL				
⑥ NDE: INTERPASS	MT PT Other	NA			Verify Interpass Temp. > 60°	⑥ Final	Symbol LBL				
⑦ NDE: FINAL PASS	MT PT RT Other	NA	5-11-77		⑦ 1st Repair Ref. WRD No.	⑦ Root Layers	Symbol LBL				
⑧ NDE: RT prior PWHT	RT	NA			⑧ 2nd Repair Ref. WRD No.	⑧ Intermediate Layers	Symbol LBL				
⑨ POST WELD HEAT TREAT	NA	NA			⑨ 2nd Repair Ref. WRD No.	⑨ Final	Symbol LBL				
⑩ NDE	NA	NA			⑩ 2nd Repair Ref. WRD No.	⑩ Intermediate Layers	Symbol LBL				
⑪ FINAL MT, P	NA	NA			⑪ 2nd Repair Ref. WRD No.	⑪ Final	Symbol LBL				

APPROVALS: 11-25-75 N. O. Seal on 12/75

2560

KAISER ENGINEERS, INC.

Wm. H. ZIMMER NUCLEAR POWER STATION - WELD DATA SHEET

(See reverse side for instructions & responsibilities)

AW 11/8/77

Field

Weld No.

System or Component: _____ ISO DWG No. _____ Line No. _____ MK# _____ To MK# _____
 Date: _____ Nom. Pipe Size: _____ Nom. Wall Thk.: _____ / Fillet Size: _____ Project Spec. _____
 To SA: _____ Welding Procedure No.: _____ Special Instructions: _____
 Miller Material Requirement: _____
 Electrode: _____
 Type: _____ Bare/Covered: _____ Size: _____ HTW/Loth: _____ Size: _____ HTW/Loth: _____
 Consumable Insert: _____ HT No.: _____ Backing Ring: _____ HT# _____
 Purge Req.: I.D. Purge: _____ CFH _____ Torch Purge: _____ CFH _____
 Heat Treat Requirements: _____
 Preheat Temp Req: _____ °F Interpass Temp Req: _____ °F Post Weld Req: _____ Procedure: _____
 Heat-Up / Installation / NDE Requirements: _____

Instructions:	Req.	QA Stamp	Date	AI Hold Pts	Record/Remarks	Instructions:	Req.	QA Stamp	Date	AI Hold Pts	Record/Remarks
1) Verify, proper weld procedure, welders qual., proper filler mat'l, proper C.I.B.R.	X	9L V0 13A	6/1/77			11) NDE:	NA	NA			
2) Verify proper bevels, details for cleanliness, damage. Verify Mark No. 5	X	9L V0 13A	6/1/77		Record MK No. -57 to MK No. 11/1	12) Verify welders I.D. on weld joint. (record welder's symbol)					
3) Verify proper fit-up, Insp. tack welds.	X	9L V0 13A	6/1/77			13) Tack					
4) NDE: Examine weld edge preparation surface	MT PT RT Other	NA				Symbol	KAB				
5) NDE: ROOT PASS (visually examine I.D. surface where accessible)	MT PT RT Other	NA				Symbol	KAB				
6) NDE: INTERPASS	MT PT Other	NA				Symbol	NA				
7) NDE: FINAL PASS Prior to PWHT	MT PT UT Other	9L V0 13A	6/1/77		Verify Preheat Temp 260° Verify Interpass Temp 260°	20) 1st Repair Ref. WRD No. _____					
8) NDE: RT prior PWHT	RT	NA				21) 2nd Repair Ref. WRD No. _____					
9) POST WELD HEAT TREAT Verify Record Time/Temp	NA	NA			Attach Time/Temp. Recordings	22) 3rd Repair Ref. WRD No. _____					
10) NDE: FINAL MT/PT	NA	NA				23) 3rd Repair Ref. WRD No. _____					

APPROVALS:

11-3-5-75

11-3-5-75

Note: If 3rd repair is not acceptable, refer to Review Board Action. Attach Copy NR.

CONSTRUCTION/PIPING INSPECTION PLAN

Building Location NE ALTO

Prepared By V C' ECHDate 9/1-24-75

REMARKS

9/27/79

VERIFY ALL REQUESTS/CHARACTERISTICS
OF THE INSPECTOR PLAN AND K-E-1 FOAM ARE
COMPLETE AND CORRECT. -INDICATE ACCEPTANCE

MEI
QNA
57

$$\frac{23}{21.8}$$

APPROVED FOR FILING:

Handwritten signature: J. S. [illegible]

5/25/11

CONSTRUCTION/PIPING INSPECTION PLAN

System Drawing No. N-1216 S.I.T. B, S REV. L
System Name Service Water
Building Location Reactor Prepared By F. Oltz

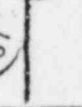
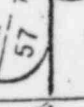
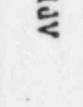
[illegible]

APPROVED FOR FTL, INC.:

MR. H. ZIMMER HUCH POWER STATION

CONSTRUCTION/PILING INSPECTION PLAN

System Drawing No. N-126 SHT. 5 REV. L Inspection Plan No. WS 45
 System Name Service Water Page 2A-3 of 45
 Building Location Reactor Prepared By F. Oltz Date 8-15-80

INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	AUTH. INSP. H.P.	REMARKS
WS K174D			8/15/80		
WS K184J			8/15/80		
WS K184H			8/15/80		
WS K184E			8/15/80		
WS K184D			8/15/80		
WS K184G			8/15/80		
WS K184F			8/15/80		
WS 60			8/15/80		
WS 61			8/15/80		
WS 62			8/15/80		
WS 65			8/15/80		
WS 66			8/15/80		
WS 60GP			8/15/80		
WS 61GP			8/15/80		
WS 64GP			8/15/80		

APPROVED FOR FILING:

[Signature]

NOTED:

CONSTRUCTION/PIPING INSPECTION PLAN

System Drawing No. H-126

System Name Service Water

Building Location Reactor

SHT. 2.5

REV. 2

Prepared By F. Oltz

Inspection Plan No. WS 45

Page 2 of 3

Date 8/15/80

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	AUTH. INSP.	H.P.	REMARKS
2	Verify following listed welds are complete and acceptable per KE-1 Form requirements:						
	WS 64B			8/15/80			
	WS 63B			8/15/80			
	WS 63C			8/15/80			
	WS 63C1			8/15/80			
	WS 63D			8/15/80			
	WS 63F			8/15/80			
	WS 63H			8/15/80			
	WS K287			8/15/80			
	WS K288			8/15/80			
	WS K289			8/15/80			
	WS K174A			8/15/80			
	WS K174B			8/15/80			
	WS K174C			8/15/80			

APPROVED:

APPROVED FOR FILING:

[Signature] 8/15/80

CLEANLINESS D

CONSTRUCTION/PIPING INSPECTION PLAN

System Drawing No.

System Name

Building Location

M-126 SHF #, 5-2-7

Prepared By V. C. CH

Inspection Plan No.

Page 1 of 1

Date 9-21-75
$$CH - CM$$

5

Date 9-21-75

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION START	DATE	AUTH. INSP.	H.P.	REMARKS
1	VERIFY ACCEPTABILITY OF THE FOLLOWING MARK NO'S / VALVES / APPURTENANCES.	RECORD					
	INDICATE ACCEPTANCE.	REVIEW					
	MARK NO P S K NO						
	IWS17A1P-52 IWS-32		KEI QA T KEI T	5-11-97			
	IWS17A1P-53 "		(Circled X)	1-2-97			
	IWS17A1P-54 "			1-8-96			
	IWS17A1P-55 "		KEI QA T Tlo	2-18-97			
	IWS17A1P-56 "		S 5	9/14/02			
	IWS17A1P-57 "		KEI QA T	6-14-96			
	IWS17A1P-58 "		(Circled X)	6-14-96			
	Valves						
	IWS028						
		See page 5 of CIP					You stamp off

APPROVED: JLB

APPROVED FOR FILING:

LB 11/25/5

CONSTRUCTION ENGINEERING

QUALITY ASSURANCE ENGINEER

DAE

Date _____

A-25
December-1980

WING NUMBER	DATE CHECKED	TEMP.	DATE	DATE	DATE	TEMP.
1	1-3-81	320°gt				
2	1-3-81	285°gt				
3	1-3-81	345°gt				
4	1-3-81	360°gt				
5	1-3-81	295°gt				
6	1-3-81	260°gt				
7	1-3-81	Repair	1-6-81	1-9-81	1-9-81	375
8	1-3-81	275°gt				
9	1-3-81	320°gt				
10	1-3-81	340°gt				
11	1-3-81	380°gt				
12	1-3-81	275°gt				
13	1-3-81	260°gt				
14	1-3-81	290°gt				
15	1-3-81	330°gt				
16	1-3-81	340°gt				
17	1-3-81	310°gt				
18	1-3-81	295°gt				
19	1-3-81	280°gt				
20	1-3-81	335°gt				
21	1-3-81	315°gt				
22	1-3-81	290°gt				
23	1-3-81	275°gt				
24	1-3-81	240°gt				

MONTHLY CHECK OF PORTABLE ROD OWENS

December - 1980

OVER NUMBER	DATE CHECKED	TEMP.	DATE REPAIR	DATE REPAIR	DATE CHECKED	TEMP.
25	1-3-81	295°gt				
26	1-3-81	315°gt				
27	1-3-81	340°gt				
28	1-3-81	360°gt				
29	1-3-81	370°gt				
30	1-3-81	305°gt				
31	1-3-81	Repair	1-6-81	1-9-81	1-9-81	310°
32	1-3-81	285°gt				
33	1-3-81	260°gt				
34	1-3-81	315°gt				
35	1-3-81	280°gt				
36	1-3-81	340°gt				
37	1-3-81	320°gt				
38	1-3-81	315°gt				
39	1-3-81	275°gt				
40	1-3-81	330°gt				
41	1-3-81	260°gt				
42	1-3-81	245°gt				
43	1-3-81	320°gt				
44	1-3-81	375°gt				
45	1-3-81	290°gt				
46	1-3-81	310°gt				
47	1-3-81	Repair	1-6-81	1-9-81	1-9-81	305°
48	1-3-81	275°gt				

December, 1980

STUDY NUMBER	DATE CHECKED	TEMP.	DATE SENT TO	DATE RETURNED	DATE RECHECKED	TEMP.
49	1-3-81	305°gt				
50	1-3-81	365°gt				
51	1-3-81	300°gt				
52	1-3-81	310°gt				
53	1-3-81	330°gt				
54	1-3-81	295°gt				
55	1-3-81	205°gt				
56	1-3-81	290°gt				
57	1-3-81	345°gt				
58	1-3-81	Repair	1-6-81	1-9-81	1-9-81	310°g
59	1-3-81	310°gt				
60	1-3-81	375°gt				
61	1-3-81	350°gt				
62	1-3-81	340°gt				
63	1-3-81	360°gt				
64	1-3-81	Repair	1-6-81	1-9-81	1-9-81	330°
65	1-3-81	310°gt				
66	1-3-81	330°gt				
67	1-3-81	Repair	1-6-81	1-9-81	1-9-81	335
68	1-3-81	365°gt				
69	1-3-81	245°gt				
70	1-3-81	300°gt				
71	1-3-81	290°gt				
72	1-3-81	300°gt				

December, 1980

UNIT NUMBER	DATE CHECKED	TEMP.	DATE CHECKED	DATE CHECKED	DATE CHECKED	TEMP.
73	1-3-81	345°gt				
74	1-3-81	<u>Repair</u>	1-6-81	1-9-81	1-9-81	340°
75	1-3-81	300°gt				
76	1-3-81	325°gt				
77	1-3-81	<u>Repair</u>	1-6-81	1-9-81	1-9-81	310°
78	1-3-81	<u>Repair</u>	1-6-81	1-9-81	1-9-81	295°
79	1-3-81	270°gt				
80	1-3-81	305°gt				
81	1-3-81	275°gt				
82	1-3-81	360°gt				
83	1-3-81	<u>Repair</u>	1-6-81	1-9-81	1-9-81	320°
84	1-3-81	310°gt				
85	1-3-81	300°gt				
86	1-3-81	290°gt				
87	1-3-81	310°gt				
88	1-3-81	345°gt				
89	1-3-81	320°gt				
90	1-3-81	250°gt				
91	1-3-81	325°gt				
92	1-3-81	325°gt				
93	1-3-81	375°gt				
94	1-3-81	295°gt				
95	1-3-81	280°gt				
96	1-3-81	305°gt				

December - 198

ITEM NUMBER	DATE CHECKED	TEMP.	REPAIR DATE	REPAIR DATE	REPAIR DATE	TEMP.
97	1-3-81	325°gt				
98	1-3-81	310°gt				
99	1-3-81	300°gt				
100	1-3-81	250°gt				
101	1-3-81	310°gt				
102	1-3-81	310°gt				
103	1-3-81	Repair	1-6-81	1-9-81	1-9-81	340
104	1-3-81	325°gt				
105	1-3-81	280°gt				
106	1-3-81	300°gt				
107	1-3-81	300°gt				
108	1-3-81	290°gt				
109	1-3-81	310°gt				
110	1-3-81	300°gt				
111	1-3-81	340°gt				
112	1-3-81	360°gt				
113	1-3-81	345°gt				
114	1-3-81	300°gt				
115	1-3-81	315°gt				
116	1-3-81	305°gt				
117	1-3-81	320°gt				
118	1-3-81	350°gt				
119	1-3-81	370°gt				
120	1-3-81	205°gt				

December-1980

WELL NUMBER	DATE CHECKED	TRIP	WELL DEPTH	WELL TYPE	WELL STATUS	TRIP
121	1-3-81	300°gt				
122	1-3-81	340°gt				
123	1-3-81	365°gt				
124	1-3-81	330°gt				
125	1-3-81	360°gt				
126	1-3-81	305°gt				
127	1-3-81	290°gt				
128	1-3-81	270°gt				
129	1-3-81	240°gt				
130	1-3-81	300°gt				
131	1-3-81	310°gt				
132	1-3-81	240°gt				
133	1-3-81	250°gt				
134	1-3-81	215°gt				
135	1-3-81	300°gt				
136	1-3-81	355°gt				
137	1-3-81	360°gt				
138	1-3-81	330°gt				
139	1-3-81	295°gt				
140	1-3-81	270°gt				
141	1-3-81	215°gt				
142	1-3-81	320°gt				
143	1-3-81	300°gt				
144	1-3-81	200°gt				

December - 198

STATION NUMBER	DATE CHECKED	TEMP.	WIND DIRECTION	WIND SPEED	SEA STATE	WAVE PERIOD	WAVE DIRECTION
145	1-3-81	305°gt					
146	1-3-81	275°gt					
147	1-3-81	320°gt					
148	1-3-81	280°gt					
149	1-3-81	250°gt					
150	1-3-81	335°gt					
151	1-3-81	320°gt					
152	1-3-81	270°gt					
153	1-3-81	245°gt					
154	1-3-81	310°gt					
155	1-3-81	265°gt					
156	1-3-81	305°gt					
157	1-3-81	285°gt					
158	1-3-81	310°gt					
159	1-3-81	270°gt					
160	1-3-81	255°gt					
161	1-3-81	205°gt					
162	1-3-81	300°gt					
163	1-3-81	295°gt					
164	1-3-81	310°gt					
165	1-3-81	275°gt					
166	1-3-81	255°gt					
167	1-3-81	320°gt					
168	1-3-81	270°gt					

December - 1980

	NUMBER	DATE OBSERVED	TEMP.	WIND DIRECTION	WIND SPEED	WIND TYPE	TEMP.
	169	1-3-81	295°gt				
	170	1-3-81	330°gt				
	171	1-3-81	340°gt				
	172	1-3-81	320°gt				
	173	1-3-81	365°gt				
	174	1-3-81	300°gt				
	175	1-3-81	340°gt				
	176	1-3-81	350°gt				
	177	1-3-81	255°gt				
	178	1-3-81	305°gt				
C	179	1-3-81	315°gt				
	180	1-3-81	350°gt				
	181	1-3-81	325°gt				
	182	1-3-81	315°gt				
	183	1-3-81	360°gt				
	184	1-3-81	290°gt				
	185	1-3-81	265°gt				
	186	1-3-81	270°gt				
	187	1-3-81	310°gt				
	188	1-3-81	300°gt	E			
	189	1-3-81	310°gt				
	190	1-3-81	245°gt				
	191	1-3-81	335°gt				
	192	1-3-81	300°gt				

December - 1980

	NUMBER	DATE CHECKED	TEMP.	DATE REPAIRED	TEMP.	DATE REPAIRED	TEMP.
	193	1-3-81	340°gt				
	194	1-3-81	360°gt				
	195	1-3-81	300°gt				
	196	1-3-81	315°gt				
	197	1-3-81	230°gt				
	198	1-3-81	320°gt				
	199	1-3-81	360°gt				
	200	1-3-81	325°gt				
	201	1-3-81	305°gt				
	240	1-3-81	235°gt				
(	243	1-3-81	340°gt				
	247	1-3-81	270°gt				
	248	1-3-81	330°gt				
	249	1-3-81	245°gt				
	350	1-3-81	300°gt				
	351	1-3-81	290°gt				
	352	1-3-81	280°gt				
	354	1-3-81	320°gt				
	356	1-3-81	275°gt				
	357	1-3-81	305°gt				
	358	1-3-81	320°gt				
	359	1-3-81	270°gt				
	360	1-3-81	280°gt				
	361	1-3-81	Repair	1-6-81	1-9-81	1-9-81	370

December - 1980

[illegible]

December - 1980

DAILY CHECK OF HOLDING OVENS.

	E 7018	E 7018	E 322-16	E 309-16	E 7019	E 7018	E 7018	F12
DATE	TEMP 7/16"	TEMP 7/8"	TEMP 3/32"	TEMP 3/32"	TEMP 1/8"	TEMP 3/32"	TEMP 5/32"	TEMP 1/2"
12-1	250°gnt	265°gnt	270°gnt	255°gnt	265°gnt	270°gnt	260°gnt	270°
12-2	245°gnt	265°gnt	260°gnt	250°gnt	260°gnt	270°gnt	255°gnt	265
12-3	260°gnt	270°gnt	260°gnt	245°gnt	255°gnt	260°gnt	265°gnt	270°
12-4	265°gnt	255°gnt	270°gnt	255°gnt	260°gnt	265°gnt	270°gnt	260
12-5	245°gnt	260°gnt	265°gnt	260°gnt	270°gnt	275°gnt	250°gnt	265
12-8	255°gnt	270°gnt	260°gnt	255°gnt	265°gnt	260°gnt	265°gnt	270°
12-9	255°gnt	265°gnt	250°gnt	260°gnt	270°gnt	260°gnt	255°gnt	260°
12-10	260°gnt	275°gnt	255°gnt	270°gnt	260°gnt	270°gnt	265°gnt	255°
12-11	265°gnt	260°gnt	270°gnt	275°gnt	275°gnt	265°gnt	250°gnt	255
12-12	250°gnt	260°gnt	275°gnt	270°gnt	265°gnt	275°gnt	270°gnt	260°
12-15	260°gnt	270°gnt	260°gnt	275°gnt	265°gnt	260°gnt	265°gnt	250°
12-16	260°gnt	275°gnt	265°gnt	270°gnt	250°gnt	265°gnt	270°gnt	265°
12-17	255°gnt	270°gnt	270°gnt	260°gnt	255°gnt	270°gnt	255°gnt	240°
12-18	270°gnt	280°gnt	265°gnt	275°gnt	260°gnt	265°gnt	255°gnt	255
12-19	265°gnt	275°gnt	270°gnt	265°gnt	260°gnt	260°gnt	270°gnt	260°
12-22	260°gnt	270°gnt	265°gnt	265°gnt	270°gnt	265°gnt	275°gnt	270
12-23	265°gnt	265°gnt	270°gnt	275°gnt	265°gnt	250°gnt	260°gnt	275
12-24	270°gnt	260°gnt	275°gnt	280°gnt	265°gnt	260°gnt	265°gnt	275
12-25	Christmas Day							
12-26	265°gnt	260°gnt	270°gnt	270°gnt	260°gnt	265°gnt	260°gnt	270
12-29	250°gnt	265°gnt	275°gnt	270°gnt	265°gnt	270°gnt	255°gnt	265
12-30	245°gnt	270°gnt	260°gnt	265°gnt	235°gnt	275°gnt	250°gnt	260
12-31	255°gnt	260°gnt	270°gnt	265°gnt	250°gnt	265°gnt	270°gnt	265

A-26
thru
A-45

A-26

KAISER ENGINEERS, INC.		SPECIAL PROCESS PROCEDURE MANUAL	
WM. H. ZIMMER NUCLEAR POWER STATION			
TITLE: WELDING FILLER MATERIALS CONTROL PROCEDURE		SPPM NO.: 3.3, R.7	Page: 2 of 7
Prepared By: W. O. Puckett		Effective Date: March 11, 1980	
Approved by:			
KEL QA Manager	<i>[Signature]</i> 11/2/80	Materials & Fabrication Technical Services	<i>[Signature]</i> 11/2/80
KEL Construction Manager	<i>[Signature]</i>	Weld/NDE QA Engineer	<i>[Signature]</i> 11/2/80

Purpose: The purpose of this procedure specification is to define the KEI Program for control of the purchase and issuance of welding filler materials used for fabrication and installation of nuclear piping, other components and appurtenances.

General:

1.0 Welding filler materials considered in this specification are as follows:

- 1.1 Covered electrodes
- 1.2 Bare rods and wire
- 1.3 Consumable insert rings
- 1.4 Flux cored electrodes
- 1.5 Submerged arc flux
- 1.6 Backing rings

2.0 All welding filler materials used at the site will be received in accordance with the procedure specified herein.

Procedure:

1.0 Requisitioning Materials

1.1 Responsibility - It shall be the Senior Construction Welding Engineer's responsibility to initiate purchase requisitions for all welding filler materials.

1.2 The Senior Construction Welding Engineer will develop appropriate material ordering information to appear on the purchase requisition form. This information must satisfy the requirements of ASME, Section III or applicable Code, the project specifications and the current rev. to SPP 3.3, R6. It is a requirement that the information appears on both the requisition and the QA reviewed and approved purchase order. The requisition and purchase order forms shall contain the items listed below as a minimum:

- 1.2.1 Nuclear (ASME Section III) or non-nuclear application
- 1.2.2 ASME-SFA (or AWS identical) Specification Number and type or classification
- 1.2.3 Size
- 1.2.4 Quantity
- 1.2.5 Testing requirements including chemical analysis, tensile tests, Charpy V-notch impact properties and testing temperature. Tensile and impact tests shall be performed, when required, using specimens from coupons in the as-welded and also in the postweld heat treated condition. The time at specified postweld heat treatment temperature shall be 6 hours, unless otherwise specified.

- 1.2.6 Test reports needed and type of information required. (See Exhibit A.)
- 1.2.7 Ferrite requirements for austenitic stainless steel filler materials, (Ref. SPTM 3.4)
- 1.2.8 Packaging requirements
- 1.2.9 Marking requirements
- 1.2.10 Additional special requirements

Any other additional pertinent data or requirements must be added where applicable. A typical purchase order for filler metal is shown in Exhibit A.

- 1.3 It is mandatory that low hydrogen-type electrodes be purchased and received in sealed moisture-proof containers. Other electrodes and filler materials shall be properly packaged to assure adequate protection during transit and storage.
- 1.4 A requirement shall be noted on the purchase requisition and purchase order that certified materials test reports which contain actual test results, shall be furnished by the welding filler material manufacturer, supplier or laboratory conducting the tests. Standard Certificates of Compliance are not acceptable.
- 1.5 Identification of all welding materials shall be in accordance with the following ASME Code, Section III requirement: "Welding materials shall be clearly identified by legible marking on the package or container to ensure positive identification of the material. The marking shall include: heat and lot number, a control marking code which identifies the materials with the Certified Materials Test Report and other information such as specification, grade and classification number, supplier's name and trade designation."

Filler materials for which all required documentation has been received and accepted shall be considered certified.

2.0 Receiving Requirements

- 2.1 The ECI Welding and NDE Quality Assurance Engineer or his designee shall check the receiving documents to assure that purchase requisition requirements have been met and that the manufacturer has provided the proper certification including actual test results. Typical certification data is unacceptable. He shall make arrangements to have weld metal tests made as required, which include mechanical properties and impact tests and chemical analysis, for each heat or lot of material received.
- 2.2 All weld filler material received shall be stored in a Receiving Hold Storage Area until confirmation of all requirements. Upon confirmation the filler material will be released to central stores for issuance.
- 2.3 Each electrode container shall be inspected for evidence of damage. Particular attention shall be paid to containers of low hydrogen type electrodes.

WELDING FILLER MATERIALS CONTROL PROCEDURE
Page 3 of 7

- 2.4 Any damaged containers shall be so identified and held aside in a segregated storage area. If a container of covered electrodes is broken, these electrodes shall not be used. If the container is damaged but unbroken, then the Senior Construction Welding Engineer or his designee is required to confirm that electrodes have not been damaged and are acceptable for use. Any covered electrodes with chipped or broken coatings shall not be used.

3.0 Central Storage

- 3.1 The following are general instructions. They will be supplemented by specific instructions, as required, by the Senior Construction Welding Engineer.
- 3.2 All welding materials shall be tagged and stored in an enclosed clean, dry storage area such as the "rod" shack.
- 3.3 Consumable insert and backing rings shall be clearly identified by a tag attached to each ring or by stamping or indelible marking.
- 3.4 The storage area shall be enclosed and have limited access. Only those personnel designated by the Construction Superintendent shall have access to this area. The stockroom/warehouse personnel shall transfer welding filler material to the "rod" shack or a satellite storage room as required after receiving inspector acceptance.
- 3.5 Storage of Welding Filler Materials.
- 3.5.1 Bare welding rods, consumable insert rings and backing rings shall be stored separately by ASME/AWS classification and size. No heated storage is required.
- 3.5.2 Unopened containers of covered electrodes shall be clearly identified and stored segregated by ASME/AWS classification.
- 3.5.3 Opened containers of covered electrodes shall be clearly identified and stored separately as follows:
- 3.5.3.1 Cellulosic electrodes such as ASME/AWS classification EXX10 shall be stored in clean dry storage areas and do not have to be placed in heated electrode holding ovens. They shall be stored separately by heat and identical lot numbers.
- 3.5.3.2 Low hydrogen electrodes, such as ASME/AWS classification EXX13 and stainless steel classification E308, shall be stored in vented electrode holding ovens at temperatures between 175°F to 400°F. Each holding oven shall contain only one single classification of electrodes segregated by heat or lot number. Individual holding ovens shall be clearly marked to indicate the classification of electrode stored within.

3.5.4 Low Hydrogen Covered Electrodes

All Low Hydrogen covered electrodes must be dry if they are to perform properly. The following procedure shall be strictly adhered to when low hydrogen covered electrodes are used.

3.5.4.1. Remove covered electrodes from the intact, sealed containers and place in heated vented electrode holding ovens (See 3.5.3.2.) or vented "rod" warmers in the central storage area or a Satellite Storage Room for a minimum of one hour at 175°F to 400°F before using.

3.5.4.2. When covered electrodes are removed from a holding oven to be issued to welders they shall be placed in a portable "rod" warmer. Only one classification and heat or lot of electrode shall be stored in each individual portable "rod" warmer. Each portable "rod" warmer shall be uniquely marked for identification purposes and shall be checked on a monthly basis to assure that each "rod" warmer maintains a correct temperature between 175°F and 400°F.

A list of acceptable rod warmers shall be maintained in the rod shack and shall show the date of last temperature check. No rod warmer shall be issued without first verifying it is on the current acceptable list. All rod warmers which are out of service because of overdue checks, damage, contamination, etc., shall be tagged out of use and the reason identified on the tag. Out of service rod warmers shall be segregated in a clearly marked area.

3.5.4.3. All covered electrodes exposed to ambient conditions for more than 4 hours without coming in direct contact with water shall be returned to central storage for rebaking. They shall be segregated according to heat and/or lot number and spread out in the furnace in such a manner so as to assure that each electrode reaches the drying temperature. The rebake cycle shall be recorded on a temperature chart.

3.5.4.4. The proper rebake temperature depends on the type and condition of covered electrode. The following classifications of electrodes that have been exposed but have not come in contact with water shall be rebaked for one hour at the listed temperature. All weld rod rebaking shall be conducted under the supervision of the Senior Construction/Welding Engineer or his designee.

<u>Electrode</u>	<u>Rebake Temperature</u>
E 7018	700°F
E 9018	750°F
E 11018	750°F
Austenitic SS	500°F

After rebaking if the electrode coating is cracked or flaking the covered electrode shall be destroyed.

3.5.4.5. Acceptable rebaked electrodes shall be stored in the holding ovens or portable "rod" warmer for reissue.

3.5.4.6. Covered low hydrogen electrodes that have come in direct contact with water or have been exposed to extremely humid conditions shall not be used or rebaked and shall be destroyed.

4.0 Local Storage Areas

4.1 Local or satellite storage areas shall be set up in order to provide easy access to weldors. All electrode handling within these local areas shall fully conform to the requirements set forth in the preceding sections covering central storage.

5.0 Electrode Identification

5.1 The material identification coding shall appear on all electrodes which are released for use as "certified." Electrodes shall not be dispensed to welding personnel without the identifying coding being affixed.

6.0 Issuing Filler Materials

6.1 It will be the responsibility of the Senior Consultant Welding Engineer to designate the proper filler materials on the KBI Weld 1 form.

6.2 The Craft Supervisor will complete and approve a KBI Weld 2 form (Ref. SPPM 8.0, Appendix C.) using the KBI Weld 1 Form information. The purpose of the KBI Weld 2 form is to provide for control of the released welding filler materials to assure that only the specified filler metal is used in any particular weld. An original and 5 copies shall be filled out. (Reference Exhibit C.)

- 6.3 The individual welder will use the KBI Weld 2 form to withdraw from storage sufficient filler material for his immediate work. Individual welders shall, at any time, have only the correct type and classification of filler materials specified in the procedure to which they are working. When more than one filler material is required by the procedure, then separate holding containers or portable "rod" warmers must be used.
- 6.4 The Weld Rod Clerk shall issue all filler material on a weight basis. He shall record on the KBI Weld 2 form the weight of all bare rod and covered electrodes issued.
- He shall also record on the KBI Weld 2 form the heat number and/or lot number for bare rods, consumable inserts and backing rings, and the heat number and lot number for covered electrodes prior to use.
- 6.5 A copy of the KBI Weld 2 form shall be placed in the traveling plastic folder assigned to the component being welded and a copy will be attached to the portable "rod" warmer and the remaining copies shall be retained by the "rod" storage custodian.
- 6.6 Craft supervisors will be responsible for assuring that portable "rod" warmers are properly used and that correct temperatures are maintained. The Senior Construction Welding Engineer will have overall responsibility for correctness of conditions in central storage, local heated holding ovens and portable "rod" warmer units.
- 6.7 ~~It shall be the welder's responsibility to assure that the portable rod warmer is used in accordance with the procedure. The welder shall not use a rod warmer if it is not properly maintained. The welder shall not use a rod warmer if it is not properly maintained. The welder shall not use a rod warmer if it is not properly maintained.~~
- 6.3 Covered electrodes that have been removed from a heated holding oven or portable "rod" warmer and exposed to the ambient temperature for more than four (4) hours without direct contact with water shall not be used but shall be accumulated, returned to central storage and baked before reissue. (See 3.5.4.4.)

Any welder making a weld and using electrode directly from his stub bucket shall not have more than five (5) sticks of covered electrode in his stub bucket at any one given time, and these electrodes are not to be exposed to ambient temperature for more than four (4) hours, (under enclosed conditions, inside.) Anytime welding is being done, outside, the humidity should be taken into consideration and under no circumstances shall covered electrode be exposed to rain, so in this case, covered electrode should not be exposed to ambient temperature for more than two (2) hours.

WELDING FILLER MATERIAL CONTROL PROCEDURE
Page 7 of 7

- 6.9 Damaged and discarded welding materials, stub ends, etc., must be cleared from work areas. A weld rod stub bucket will be issued to each welder. The welder is to put his weld rod stubs in his stub bucket and return the weld rod stubs and the stub bucket at the end of the shift to the weld rod shack personnel. Weld rod shack personnel shall receive weld rod stubs and stub buckets and shall dump stubs into appropriate container located outside weld rod shack.

7.0 Return of Filler Materials

- 7.1 The Craft Supervisor will be responsible to assure that all welders will return all unused wire and electrodes to the appropriate storage area at the end of each shift. Low hydrogen type electrodes shall be returned to the correct holding or retake oven or shall remain in the portable rod warmer.
- 7.2 It shall be the responsibility of duly assigned personnel to record the applicable heat and lot numbers for all bare rod as well as covered electrodes returned to the "rod" shack and/or satellite storage in portable "rod" warmers. Covered electrodes added to these "rod" warmers shall be of the same heat and lot number.
- 7.3 The Weld Rod Clerk shall weigh all bare rod and covered electrodes returned to Central Storage and record the weight on the KEI Weld 2 form. A new KEI Weld 2 form will be made out for each new issue of electrodes to and for each welder.

8.0 Documentation

- 8.1 The KEI Welding and NDE Quality Assurance Engineer shall be responsible for completion of the KEI Weld 1 forms.
- 8.2 The KEI Welding and NDE Quality Assurance Engineer shall review and accept or reject all certified materials test reports covering welding filler materials.
- 8.3 The KEI Welding and NDE Quality Assurance Engineer shall assure that all pertinent documents covering welding operations are properly filled and in current condition at the Site Documentation Center.

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENTP. O. BOX 201
MOSCOW, OHIO 45153

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light CompanyPURCHASE
ORDER NO. 7070-34356

SHEET 1 OF 2 SHEETS

THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

Date: 5/1/79

SELLER

Murex Welding Products
3205 Eighth Ave. North
Birmingham, Alabama 35203

Attention: Dave Clark

Phone:

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:

EXHIBIT "A" - SPECIFICATION NO.

EXHIBIT "B" - TERMS AND CONDITIONS

EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: 6/15/79

TERMS OF PAYMENT: Net 30

PRICE POLICY:

POINT OF ORIGIN:

F.O.B. POINT: Jobsite

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
1.	10,000	Lbs.	<u>Phase II Piping</u> 1/8" E7018 coated welding electrode to ASME Code SFAS.1 with full nuclear certification, see sheet #2, packaged in 10# containers. CONFIRMING-DO NOT DUPLICATE Packing List Must Be Included With Each Shipment All goods furnished under this order shall fully comply with all applicable health and safety laws, rules, and regulations including without limitation the Occupational Safety and Health Act of 1970 and the rules and regulations issued pursuant thereto.	\$.611/ Lb.	\$ 6110.00	7811.9833.31
SALES OR USE TAX EXEMPTION						
TOTAL OF ORDER					\$ 6,110.00	

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EX-
CISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE
OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT
PERMITS 198000298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.

Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation 10 CF Part 21, Notification and Reporting of Defects and Non-compliances.

ESSENTIAL

INSPECT TO INSTRUCTION

KEI GAW 113

QAE 5-10-79

REQ. NO. 32133

SPEC. NO.

PROJECT ENGINEER E. Gaertner
DOK:lc
5/7/79

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTHORIZED SIGNATORY

D. O'Keefe
District Agent

(See Note Below:)

Vendor MUREX WELDING PRODUCTS
Address 3205 EIGHTH AVE. NORTH
BIRMINGHAM, ALABAMA 35203KEI P.O. 7070-34356
Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by E. J. Hartman 4/3/79

Owner: _____

Weld Filler Material - Purchase Check List *Page 2*

Date 4-3-79
Reg-7070-32133

(See Note Below:)

Vendor MUREX WELDING PRODUCTS
Address 3205 EIGHTH AVE. NORTH
BIRMINGHAM, ALABAMA 35203

KEI P.O. 7070-34356

Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and IX-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by *SAH* 4/1/79

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT
P.O. BOX 201
MOSCOW, OHIO 45153

PHONE:
CABLE: KAISENGS
TELEX:

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

CHANGE NO. "A"
PURCHASE ORDER NO. 7070-34356

SHEET 1 OF 1 SHE
THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

PURCHASE ORDER CHANGE

DATE	TO BE SHIPPED
5/7/80	N/A

SELLER

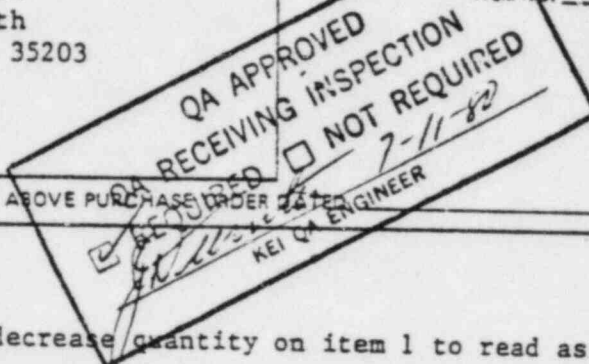
Murex Welding Products
3205 Eighth Ave. North
Birmingham, Alabama 35203

Attention:

Phone: (615) 875-3429

WORK ORDER NO. 57300

ITEM NO.



PLEASE MAKE THE FOLLOWING CHANGES IN THE ABOVE PURCHASE ORDER

5/1/79

7811.9833.31

This change is issued to decrease quantity on item 1 to read as follows:

1. 6300 Lb. E7018 coated welding electrode \$.611/lb. \$ 3,849.30

CONTINUING DO NOT DUPLICATE

Packing List to be included

With Each Shipment

Materials or services specified in this purchase order
shall be furnished in accordance with the requirements of the
purchase order and the terms and conditions of the purchase order.

All other terms and conditions of original order remain unchanged.

ESSENTIAL

All goods furnished under this order shall fully comply
with all applicable federal and state laws, rules and
regulations and shall be free from all defects and
damages and shall be delivered in accordance with the
terms and conditions of the purchase order.

INSPECT TO INSTRUCTION

KEI QA NOTED

QAE *[Signature]* 7-11-80

SALES OR USE TAX EXEMPTION

Previous Total:
Change "A" Decrease:

\$ 6,110.00
(2,260.70)

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EX-
CISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE
OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT
PERMITS PROCEDURE ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; BEC00343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND BEC00343 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.

REVISED TOTAL
OF ORDER

\$ 3,849.30

INVOICE PURCHASER

AND MAIL FIVE (5) COPIES WITH
ORIGINAL BILL OF LADING TO:

HENRY J. KAISER COMPANY
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTHORIZED SIGNATORY

TITLE Purchasing Agent

REQ. NO. 32133 SPEC. NO. R-1

PROJECT ENGINEER W. Puckett

KC:lc

5/7/80

WJCC 105 - Rev. 1

KAISER ENGINEERS, INC.

Moscow, Ohio

DAMAGE REPORT

REPORT NO. 19921.907M. R. NO. 55754P. O. NO. 7070-34356REQ. NO. 7070-32133DATE 10-16-79DATE SHIPPED 6-19-79 POINT OF ORIGIN BIRMINGHAM, ALABAMA DESTINATION MOSCOW, OH.SHIPPER MUREX WELDING PRODUCTS CONSIGNEE KAISER ENGINEERS, INC.COMMODITY COATED WELDING ELECTRODE FREIGHT BILL NO. 132745CAR INITIALS AND NO. N/A CONDITION OF CAR N/ADATE OF ARRIVAL N/A DATE SPOTTED FOR UNLOADING N/ASEAL RECORD, RIGHT N/A LEFT N/AUNLOADING COMMENCED (DATE) N/A (HOUR) N/A FINISHED (DATE) N/A (HOUR) N/AIF RECEIVED BY TRUCK, WHAT TRUCKING COMPANY BUDIG WESTERNWHEN WAS DAMAGE DISCOVERED 9-28-79 BY WHOM B.L. LESSLEY / J. HORNBECKDATE AND HOUR CARRIER NOTIFIED OF DAMAGE 10-16-79 2:40 P.M.

IF MATERIAL RECEIVED DID NOT FILL CONTAINER, WHAT MATERIAL OCCUPIED REMAINING SPACE?

200 EA. 30# CANS ON 6 SKIDS WITH PLASTIC SHRINK WRAP.IF WOODEN BOX, WAS IT NEW? N/A WAS IT CORDED OR STRAPPED? N/AIF FIBERBOARD, WERE FLAPS SEALED, GLUED, CLEATED OR STAPLED? N/AWAS DAMAGE OF SUCH NATURE THAT IT COULD HAVE BEEN NOTICED AT TIME OF DELIVERY? NODESCRIBE FULLY THE NATURE AND EXTENT OF DAMAGE AND WHAT INDICATED DAMAGE OCCURRED WHILE IN CARRIER'S POSSESSION 74 CANS DENTED & SOME SPLIT OPEN. (3700# NET WT)WHERE ARE DAMAGED GOODS NOW LOCATED? H. J. K. CO. WAREHOUSEDESCRIPTION OF SALVAGE UNKNOWNDID CARRIER'S REPRESENTATIVE MAKE AN INSPECTION, IF SO, WHEN AND BY WHOM? YES, 10-18-79ANDY DIEMM OF BUDIG WESTERN

IF NO INSPECTION OR REPORT WAS MADE, STATE WHY

Andy Diemm INSPECTORBUDIG WESTERN CARRIER'S REPRESENTATIVE

NAME OF CARRIER

AGENT

DATE 10-18-79

RR OR TRUCK COMPANY

YOU ARE HEREBY NOTIFIED THAT THE ABOVE DAMAGE (OR LOSS) WAS NOTED AS PER THIS INSPECTION REPORT. WE HEREWITH FILE PRELIMINARY CLAIM IN THE AMOUNT OF \$25.00 MORE OR LESS, FOR THE DAMAGE (OR LOSS) INCURRED AND AS SOON AS THE EXACT VALUE INVOLVED IS DETERMINED, FINAL CLAIM WITH NECESSARY SUPPORTING DOCUMENTS WILL BE FILED WITH YOU OR THE INITIAL CARRIER WHO ISSUED THE BILL OF LADING.

TRAFFIC DIVISION

BY: N.A. Z

INSPECTION REPORT OF LOSS OR DAMAGE DISCOVERED AFTER DELIVERY

TERMINAL CINTI Date 10-18 1979 Report Number _____
 Shipper MUREX WELDING PROD Address CLEVELAND, OHIO
 Consignee KAISER ENG. INC. Address 1405 COW, OHIO 45153
 F/B No. 132745 Prepaid ☒ Collect ☐ Date Consignee requested inspection 10-16-79

Date of Billing 6-22 1979 Date Delivered 6-25 1979 Loss or Damage None Could loss or damage have been noticed at time of delivery? _____
 Date Unpacked 9-28-79 19 Date of Call 10-16-79 Were goods unpacked before the inspection was made? YES Were containers and packing available? YES

What evidence was there of pilferage before delivery? N/A

Was there sufficient space in package to contain missing goods? N/A What material occupied the remaining space? N/A

Did comparison of check with invoice or weighing package, verify loss? N/A If released valuation, show weight of articles damaged or short N/A

Kind of Container SKID & METAL BOX New or Old Old Wired ☐ Corded ☐ Strapped ☐ Nailed ☐ Sealed ☐
 (Carton, Box, Crate, etc.)

Box Maker's Gross Weight Limit N/A Gross Weight of Loaded Carton N/A If Carton Were Flaps Glued? N/A Were Seams or Edges Split? N/A

How were goods packed? METAL BOXES ON SKID WITH PLASTIC WRAP

Do you consider adequately packed or protected? YES What condition of container or contents indicated loss or damage occurred with carrier? _____

To prevent comparable damage in the future, how in your judgment should they have been packed or prepared for shipment _____

Did shipment have prior transportation? _____ If so, is merchandise still packed in original container? _____ Original point of shipment _____

No. of Articles	Describe fully nature and extent of loss or damage	Actual Value
<u>17</u>	<u>BOXES WELDING ROD ARE DEFECTIVE END OR TCID. MATERIAL TO BE USED IN NUCLEAR CONSTRUCTION AND NOT ACCEPTABLE FOR TUB</u>	
<u>(3700)</u>		
	(If necessary use additional sheet)	

Will there be salvage? YES What disposition will be made of the salvage? _____

Consignee KAISER ENGINEERING Carrier BUDIG WESTERN
 By William P. Furee By Edward E. Dineen Inspector

EXECUTION OF THIS REPORT DOES NOT CONSTITUTE LEGAL FILING OF CLAIM IN WRITING.

This report is merely a statement of facts and not an acknowledgement of Carrier's liability. When presenting claims for loss and damage, attach the following documents:

1. This Inspection Report
2. Original Paid Freight Bill
3. Original Bill of Lading
4. Original Invoice or an exact certified copy showing all discounts
5. Your Bill showing nature and amount of claim
6. Shipper's and Consignee's Concealed Loss and Damage Forms

HENRY J. KAISER COMPANY

Moscow, Ohio

MATERIAL RECEIVED REPORT

THIS ORDER IS:

COMPLETE ☒NOT COMPLETE ☐REC. DAMAGED ☐

M.R. NO.: 55754

PAGE 1 OF 1

P. O. NO.: 7070-34356

REQ. NO.: 7070-34133

DAMAGE REPORT NO. N/A DATE RECEIVED: 6-25-79

ORDERED FROM: MUREX WELDING PRODUCTS

BIRMINGHAM, ALABAMA

SHIPPED BY: SAME

CARRIER	RUDIG WESTE
FREIGHT BILL	NO.
EXPRESS BILL	WGT. 10600
PARCEL POST	DATE 6-25-79
PREPAID	AMT. \$ 223.66
COLLECT	AMT. \$
RAIL LINE	
CAR NO.	
DOCK NO.	

SHIPPED TO: JOBSITE PACKING SLIP NO.: 132745

VIA: RUDIG WESTERN F.O.B. POINT: JOBSITE

P.O. ITEM NO.	QUANTITY	UNIT	DESCRIPTION	LOCATION	ACCOUNT NO.
			PHASE II PIPING		
1	10,000	LBS	1/8" E7018 COATED WELDING ELECTRODE	STOCK ROOM	7811.9833.31
			1318-7144, SPOX-HTS-M-MR, MUREX		
			HT. # A80964 LOT # 0268203		
			200 CANS @ 50# EA. (ON 6 SKIDS) = 10,000#		
			TEST REPORTS FURNISHED WITH SHIPMENT.		

DWG. NO. _____

B.M. O. _____

REQ. ORIGINATOR E. GLERTNER

INSPECTED TO KEI. RAW 113 DATE 6-22-79 STAMP.	KEI OR 53 37
---	--------------

QUALITY ASSURANCE INSPECTOR

J. Morris 6-27-79
CHECKED BY

ASST. WHSE. SUPT.

J. Davis
WAREHOUSE SUPT.



QUALITY CONFORMANCE REPORT

R-211 - 9
PRD. 1/4 1

SHIP

June 11, 1979

LA80964

DATE

531-136

AIRCO ORDER NO.

7070-34356

CUSTOMER ORDER NO.



NUMBER N-1584

EXPIRES DEC. 23, 1979

SPECIFICATION: ASME SFA 5.1, ASME SECT. III

ITEM	WEIGHT (LBS)	SIZE	TYPE	HEAT NO.	LOT NO.
1	10,000#	1/8"	7018	A80964	026B203
2					
3					

CHEMICAL ANALYSIS is (1) Actual Weld Metal ☒ (2) Typical Weld Metal ☐ (3) Mill Check Analysis ☐ (4) Actual Wire Analysis ☐

ITEM	C	Mn	P	S	Si	Ni	Cr	Mo	Cb	V	Cu			
1	.049	.75	.015	.021	.60	.034	.043	.076	--	.008	.094			
2														
3														

MECHANICAL PROPERTIES

(1) Actual Weld Metal ☒(2) Typical Weld Metal ☐

ITEM	TENSILE P.S.I.	YIELD P.S.I.	% EL.	% R.A.	OTHER
1	85,900	73,700	28.0	74.5	As Welded
2	77,100	66,050	35.0	75.4	Stress relieved at 1150°F for 8 hours
3					

ADDITIONAL TESTS

X-Ray satisfactory to paragraph 8.1.1 of SFA 5.1

Fillet Weld Test satisfactory to paragraph 8.1.4 of SFA 5.1



6-27-79

Sworn and Subscribed before me this 11th

day of 19 79

TERESA ZISMAN
NOTARY
PUBLIC
By Commission Expires 7/1/82

"I certify the chemical analysis and physical or mechanical test results, as contained in the records of the company and reported above, are correct and accurate and all test results and operations performed are in compliance with the requirements of the material specifications listed above"

Goldie G. Hall 6/11/79
Authorized Signature Date

Goldie G. Hall-Quality Control Expediter

NAME

TITLE

QUALITY CONFORMANCE REPORT

R-210 - 9
PRD. IN

IMPACT TEST

CERTIFICATE OF TEST • CHARPY V-NOTCH IMPACTS

June 11, 1979

DATE

531-136

ORDER NO.

7070-34356

CUSTOMER ORDER NO.

TYPE	DIAMETER	LOT NO.	HEAT NO.
7018	1/8"	026B203	A80964

TEST TEMPERATURE -20°F

As-Welded

<u>Specimen No.</u>	<u>Energy (ft-lb)</u>	<u>Lateral Expansion (mils)</u>	<u>Shear (%)</u>
1	87*	64	45
2	77	57	45
3	87	65	50
4	77	57	40
5	75*	56	45

Average 80

Stress Relieved at 1150°F for 8 hours

<u>Specimen No.</u>	<u>Energy (ft-lb)</u>	<u>Lateral Expansion (mils)</u>	<u>Shear (%)</u>
1	79*	60	50
2	115	80	55
3	117	81	55
4	110	80	50
5	132*	82	70

Average 114

6-27-79

Goldie G. Hall
AUTHORIZED SIGNATURE

6/11/79

DATE

Goldie G. Hall - Quality Control Expediter

* The extreme lowest and highest values were disregarded for computing average.

** The specimen failed to fracture at 240 ft-lb the maximum reading for our instrument.

WM. H. ZIMMER NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. PHASE II PIPING
 Component Name Weld Filler Material E7018 WELDING ELECTRODES
 Supplier MUREX Prepared By J. Deerwester

PO No. 7070-34356
 MR No. 55754
 Inspection Plan No. QAW 113
 Page 1 of 1
 Date 5-14-76 REV. 1

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.	Visual		6-27-79	
2	Proper marking, per code specification, on individual containers including SFA specification. Record Heat Nos., Lot No. by size. <u>1/8" 7018 A 80964 026B203</u>	Visual		6-27-79	
3	Tagged (Both ends as required).	Visual	NA		
4	Received from KEI approved supplier (applies to manufacturer and distributor).			6-27-79	
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).	Visual		6-27-79	
6	Dimensional, except sealed material. Do not open sealed cans.		NA		

APPROVED:

NJ Friedrich
 QA Manager

APPROVED FOR FILING:

J. Deerwester
 QAE
6-28-79
 DATE

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT
P.O. BOX 201
MOSCOW, OHIO 45153

PHONE:
CABLE: KAISENGS
TELEX:

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

CHANGE NO. "A"
PURCHASE
ORDER NO. 7070-35720

SHEET 1 OF 1 SHEET
THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

PURCHASE ORDER CHANGE

DATE	TO BE SHIPPED
11/2/79	N/C

SELLER

Chemetron Corp./ Alloy Rods Div.
P.O. Box 517
Hanover, Pennsylvania 17331

Attention: Dottie Arigo
Phone (216) 692-3208

WORK ORDER NO. 57300

ITEM NO.

5/23/79

PLEASE MAKE THE FOLLOWING CHANGES IN THE ABOVE PURCHASE ORDER DATED

This change order is issued to change FOB point to read as follows:

FOB: Hanover, Pa.

All other terms and conditions of original order remain unchanged.

ESSENTIAL

INSPECT TO INSTRUCTION

KEI GAW 113

QAE 11-9-79

All goods furnished under this order shall fully comply with all applicable health and safety laws, rules, and regulations, including without limitation the Occupational Safety and Health Act of 1970 and the rules and regulations issued pursuant thereto.

QA APPROVED

QA RECEIVING INSPECTION

☒ REQUIRED ☐ NOT REQUIRED

11-9-79
KEI QA ENGINEER

Materials or services supplied on this purchase order shall comply with provisions of 16 CFR Regulation 10 CFR Part 21, Notification and Reporting of Defects and Non-compliances.

CONFIRMING--DO NOT DUPLICATE
Packing List Must Be Included
With Each Shipment

SALES OR USE TAX EXEMPTION

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ASCERTAINED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS 28000228 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 28000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 28000465 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.

REVISED TOTAL
OF ORDER

No Change

INVOICE PURCHASER

REQ. NO. 33331 R-1 SPEC. NO.

AND MAIL FIVE (5) COPIES WITH
ORIGINAL BILL OF LADING TO:

PROJECT ENGINEER E. Gaertner

KMC:be

11/6/79

HENRY J. KAISER COMPANY
P.O. Box 201

PURCHASER
HENRY J. KAISER COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTHORIZED SIGNATORY

HENRY J. KAISER COMPANY

Moscow, Ohio

MATERIAL RECEIVED REPORT

M.A. NO.: 5773.

PAGE 1 OF 1

P. O. NO.: 7070-3572

REQ. NO.: 7070-33331 R-

THIS ORDER IS:

COMPLETE 

NOT COMPLETE ☐

REC. DAMAGED ☐

DAMAGE REPORT NO. N/A DATE RECEIVED 9-24-79

ORDERED FROM: CHEMETRON CORP / ALLOY RODS DIV

HANOVER PENN.

SHIPPED BY: SAME

SHIPPED TO: JOBSITE PACKING SLIP NO.

VIA SMITH'S TRANS CORP F.O.B. POINT JABSITE

CARRIER		- STCS -
FREIGHT BILL		NO. 918433
EXPRESS BILL		WGT. 10,500 #
PARCEL POST		DATE 9-24-7
PREPAID	✓	AMT. \$ 355.5
COLLECT		AMT. \$
RAILLINE		
CAR NO.		
DOCK NO.		

[illegible]

DWG. NO. _____

U. S. O. _____

REQ ORIGINATOR W. PICKETT

INSPECTED TO

KEI GAW113

DATE 9-27-79 STAMP

QUALITY ASSURANCE INSPECTOR

Q4OK
ms 9-27-76
CHECKED BY

ASS. W-SE. SUP.

WAREHOUSE SUPT

ALLOY RODS DIVISION

CHEMETRON CORPORATION
P.O. BOX 517 HANOVER, PA 17331 717/637-8911

CERTIFICATE OF ANALYSIS

1422H8211

CERTIFIED MATERIALS TEST REPORT

Henry J. Kaiser Co.
US Rt. 52
REF: 35720
Moscow, OH 45153

Customer Order No. 35720

Order No. 178059-1

Shipped

This material conforms to Specification
ASME SFA 5.1 Sec II Part C and
ASME Sec III NB-2400

Trade Name
or Trademark: Atom Arc 7018

Diameter Size: 3/32"
WEIGHT: 10,000 lbs.
Lot Number: 02-3-G916Q
Heat Number: 422H8211

Type E 7018

Test No. 3797
Control No. TTT092
X-Rays Satisfactory ✓

Carbon .03 ✓
Manganese 1.01 ✓
Chromium .03 ✓
Nickel .02 ✓
Silicon .43 ✓
Columbium +
Tantalum
Molybdenum .01 ✓
Tungsten
Copper .01
Titanium
Phosphorus .011
Sulphur .015 ✓
Vanadium .03 ✓
Cobalt
Ferrite

Moisture @1800°F. 0.35%
Concentricity 4%
Type Steel A-285

Test No.	Full	Split	Volts	Amps
Tensiles & Impacts	1	4	21	95

Test Results:	As Welded	Stress Relieved 8hrs. @1150°F.
Yield	69,000 ✓	65,300 ✓
Tensile	81,000 ✓	80,200 ✓
Elongation	26.0% ✓	31.0% ✓
Red. of Area	65.4%	77.0%

Charpy V-Notch Impacts Tested @-20°F.
Impacts 46-100-24-88-79/88-23-77-91-64
Lat. Exp. 38-74-23-66-62/69-22-66-76-54
% Shear 20-40-15-30-30/30-15-20-20-20

Tensile Specimen: .252"
Impact Specimen: .394" x .394"

Quality Systems Certification No.: N-1224
Expiration Date: September 8, 1981

State of Penna)
County of York) SS

Subscribed and sworn to before me
this 19th day of September 1979



9-26-79

SEAL

Kay Olden
Notary Public

My commission expires: 11/22/82

The undersigned certifies that the contents of
this report are correct and accurate and that all
operations performed by the undersigned or sub
contractors are in compliance with requirements
of the material specification and ASME Boiler and
Pressure Vessel Code Section III Division I Sub-
section NCA 1400

ALLOY RODS DIVISION
CHEMETRON CORPORATION

BY

D. A. Smith
D. A. Smith

WM. H. ZIMMER NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. SFA 5.1Component Name Weld Filler MaterialSupplier CHEMETRON CORP.Prepared By J. DeerwesterPO No. 7070-35720MR No. 57738Inspection Plan No. QAW 113Page 1 of 1Date 5-14-76 REV. 1

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.	Visual		9-27-79	
2	Proper marking, per code specification, on individual containers including SFA specification. Record Heat Nos., Lot No. by size. #1/T 42248211 3/32" LOT-02-3-G9169	Visual		9-27-79	
3	Tagged (Both ends as required).	Visual		9-27-79	
4	Received from KEI approved supplier (applies to manufacturer and distributor).				
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).	Visual		9-27-79	
6	Dimensional, except sealed material. Do not open sealed cans.				

APPROVED:

M. J. Friedrich
QA Manager

APPROVED FOR FILING:

J. Deerwester
QAE

9-27-79
DATE

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENT

P. O. BOX 201
MOSCOW, OHIO 45153

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

PURCHASE ORDER NO. 7070-35720

SHEET 1 OF 2 SH

THIS ORDER NUMBER MUST APPEAR
ALL INVOICES, PACKAGES, PACK
SLIPS, BILLS OF LADING, ETC.

Date: 5/23/79

SELLER

Chemetron Corp./Alloy Kods Division
P.O. Box 517
Hanover, Pennsylvania 17331

Attention: Dottie Arigo
Phone: (216) 692-3208

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:

EXHIBIT "A" - SPECIFICATION NO.
EXHIBIT "B" - TERMS AND CONDITIONS
EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: 2 weeks ARO

POINT OF ORIGIN:

TERMS OF PAYMENT: Net 30 days

F.O.B. POINT: Jobsite

PRICE POLICY:

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
			<u>Phase II Piping</u>			
1.	10,000	Lbs.	3/32"E-7018 coated welding electrode in accordance with ASME Code SFA5.1 with full nuclear certification and packaged in 50# hermetically sealed cans	\$.613	\$ 6130.00	7811.9833.31
2.	1	Lot	Test Charges	L.S.	230.00	
Weld Filler Material - Purchase Check CONFIRMING - DO NOT LIST IS attached hereto and made a part of order. Back of this order is enclosed With each shipment Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation 10 CFR Part 21 Notification and Reporting of Defects and Non-compliances. SALES OR USE TAX EXEMPTION THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS 98000298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000406 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.						
				TOTAL OF ORDER	\$6,360.00	

ESSENTIAL

INSPECT TO INSTRUCTION

KEI DAW 113
QA ENGINEER 8-30-79

QA APPROVED

QA RECEIVING INSPECTION

☒ REQUIRED ☐ NOT REQUIRED

KEI QA ENGINEER

REQ NO. 33331 R-1 SPEC. NO.

PROJECT ENGINEER E. Gaertner
KC:lc
8/23/79

kmc

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTHORIZED SIGNATORY

Weld Filler Material - Purchase Check List

Date 7/26/79
2 of 2

(See Note Below:)

Vendor CHEMETRON CORP./ALLOY RODS DIVISION
Address P.O. Box 517
Hanover, Pennsylvania 17331

KEI P.O. 7070-35720
Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. <u>✓</u>	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____
2. All Weld Metal Tensile-as welded <u>✓</u>	2. All Weld Metal Tensile-as welded _____	2. Weld Dep. Ferrite _____	2. All Weld Metal Tensile-as welded _____
3. All Weld Metal Tensile-stress relief <u>✓</u>	3. All Weld Metal Tensile-stress relief _____	3. Test 8A X-Ray _____	3. All Weld Metal Tensile-stress relief _____
4. All Weld Metal Impact-as welded <u>✓</u>	4. All Weld Metal Impact-as welded _____	SFA 5.9 Stainless Steel Bare Wire	4. All Weld Metal Impact-as welded _____
5. All Weld Metal Impact-stress relief <u>✓</u>	5. All Weld Metal Impact-stress relief _____		5. All Weld Metal Impact-stress relief _____
6. Test X-Ray <u>✓</u>	6. Test X-Ray _____	1. Weld Dep. Chem. _____	6. Test X-Ray _____
7. Mill Test Reports <u>✓</u>	7. Mill Test Reports _____	2. Weld Dep. Ferrite _____	7. Mill Test Report _____
		3. Mill Test Report _____	8. 10# Tube _____
		4. 10# Tube _____	9. Tagged both ends _____
		5. Tagged Both ends _____	

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b - 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by E. H. Martin

TERMS AND CONDITIONS

THIS PURCHASE ORDER IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

In the event Seller's Quotation, acknowledgment, confirmation, invoice or other form states terms additional to or different from those set forth herein, this Purchase Order shall be deemed a notification of objection to such additional and/or different terms and a rejection thereof. This Purchase Order constitutes an offer to purchase, and not an acceptance of any offer to sell, the goods and any services described herein which may be accepted only in accordance with its terms and without modification, addition, deletion or alteration. In the absence of written acceptance or other written confirmation hereof by Seller, the commencement of any work by Seller in pursuance of this order or the making of any deliveries by Seller of the goods and services described herein shall be deemed an acceptance hereof and a contract shall be formed only upon the terms and conditions set forth herein.

1. As used herein, the term "Purchaser" means the party designated as such on the face of this purchase order; the term "Seller" means the party designated as such on the face of this order, and the term "Engineer" means Sargent and Lundy.
2. This purchase order, when properly signed by Purchaser and bearing an order number, is the only authorization which will be recognized by Purchaser for charges to its account.
3. Neither the quantity nor quality of the goods delivered by Seller to Purchaser shall differ from those specified on the face hereof, nor shall any other modifications of this purchase order be effective unless such changed quantity or other modification is first ordered by Purchaser by written change order. Seller shall make no shipment of non-conforming goods, whether as an accommodation or otherwise, unless first authorized in writing by Purchaser.
4. Seller shall properly package all goods for safe shipment to the Purchaser and a notice of shipment shall be sent by Seller to Purchaser at the time the goods described herein are shipped which shall state the number of the order, the kind of goods, the Seller's name and the carrier and route by which the shipment is being made.
5. Seller warrants that any transportation costs included in the price will not exceed actual transportation costs paid by Seller. If this order calls for payment of any transportation costs by Purchaser, Purchaser shall in no event be liable or accountable for any amount in excess of the actual costs of transportation. Seller shall be accountable for and pay any excess transportation costs arising from Seller's failure to make delivery to the F.O.B. Point or to follow shipping instructions furnished by Purchaser.
6. In placing this Purchase Order, Purchaser is relying on Seller's skill and judgment in selecting and providing the proper goods and any applicable services for Purchaser's particular use. Seller warrants to Purchaser and its successors in interest that the goods and any services covered hereby will correspond with the description of the same on the face of this order, will conform to any applicable specifications, shall be new and of the best quality unless otherwise specified, and will be fit for the purpose for which they are furnished. Seller also warrants that said goods are free and clear of all liens and encumbrances whatsoever and that Seller has a good and marketable title to same, and Seller agrees to hold Purchaser free and harmless against any and all claimants to said merchandise.
7. Seller represents that it has fully investigated all specifications, including any furnished by Purchaser, in connection with the goods, and based on such investigation and its past experience and superior knowledge with respect to such goods, has determined that the production thereof will not infringe any patent, trademark, trade secret or copyright. Seller warrants to Purchaser and its successors in interest that the sale or use of the goods and any services covered by this order, whether manufactured in accordance with Purchaser's specification or otherwise, do not and will not infringe upon any patent, trademark, trade secret or copyright and Seller shall defend, indemnify and hold Purchaser and its successors in interest free and harmless from and against any and all claims, demands, costs and liabilities, including legal expenses, arising out of any such infringement or claim of infringement. Purchaser is relying upon the experience, skill and superior knowledge of Seller with respect to the goods and makes no representation that Seller will be safe in manufacturing the goods as required under this order. In no event shall Purchaser or its successors in interest be liable to Seller for any patent, copyright, trade secret or trademark infringement or claim thereof. In the event Purchaser and/or its successors in interest is or are enjoined from the operation, use and/or sale of the goods or any services, or any part thereof, covered by this order, Seller shall (at its sole expense) take all reasonable steps possible to procure for Purchaser and its successors in interest the right to operate, use and sell said goods or any services, or any part thereof, covered by this order. If Seller cannot so procure the aforesaid right within a reasonable time, Seller shall then promptly (at Seller's sole expense):
 - (a) Modify said goods or services, or any part thereof, so as to avoid infringement of any patent or other proprietary interest, or
 - (b) Replace said goods or services, or any part thereof, with goods or services which do not infringe or violate any said patent or other proprietary interest, or
 - (c) Remove said goods or services, or any part thereof, and refund any compensation theretofore paid to Seller and pay to Purchaser any transportation costs and expenses that may have been paid or incurred by Purchaser in connection with the goods or any services, or any part thereof, so removed.

8. Seller shall assume and pay any and all loss or damage to the goods from any cause whatsoever until Purchaser takes delivery of the goods at the point of ultimate destination. Notwithstanding the foregoing or any terms of shipment, title to the goods shall pass from Seller to Purchaser when the goods are transferred at the point of origin to railroad, truck, or other transportation facility.
9. Seller warrants and agrees that all goods delivered pursuant to this order shall be produced, sold and delivered to Purchaser in compliance with and conforming to all applicable laws and governmental orders, rules and regulations, and that the prices for such goods are not in excess of any applicable price established by law or governmental regulation. Seller shall furnish to Purchaser upon request certificates or other evidence showing compliance with this Article.
10. Purchaser shall have the right to perform such examination, inspection and tests of equipment material and workmanship as he may desire to assure himself that the goods meet all specified requirements of the Purchase Order. The Seller shall upon reasonable notice permit unrestricted access to the Purchaser or his duly authorized representative(s) to his place of manufacture and to that of his sub-suppliers for the purpose of conducting such examination, inspection and tests at any and all times that the goods are in the process of manufacture, fabrication, assembly, testing or inspection. The Seller shall provide the Purchaser with sufficient, safe and proper facilities for the performance of said inspection.

Inspection documents in the quality control files of the Seller and his sub-suppliers which relate to work performed under the Purchase Order shall be accessible for examination by the Purchaser.

The Purchaser or his duly authorized representative shall have authority to reject materials or workmanship which are defective or not in accordance with the Purchase Order and to require their correction. Any material or work which is found defective or in nonconformance with the Purchase Order requirements, shall be satisfactorily corrected or replaced by the Seller without cost to the Purchaser.

Notwithstanding any prior payment therefor, all goods are subject to inspection and testing by Purchaser after arrival at the ultimate destination, and if the goods are to be incorporated into a plant or other operating facility, Purchaser's inspection and testing of the goods may be made under operating conditions after the goods have been installed. If upon inspection or testing such goods or any portion thereof are found to be non-conforming, unsatisfactory, defective, of inferior quality or workmanship or fail to meet any guarantees or operating or other specifications contained herein or any other requirements of this Purchase Order, then without prejudice to any other rights or remedies, Purchaser may return the goods or any part thereof to Seller, and all amounts theretofore paid by Purchaser to Seller on account of the purchase price of such returned goods, together with any costs incurred by Purchaser in connection with the original delivery or return of such goods, shall be repaid to Purchaser by Seller. Neither the inspection nor failure to make inspection nor acceptance of goods shall release Seller from any of the warranties or other provisions of this order nor impair Purchaser's right to reject non-conforming goods. Purchaser reserves the right, even after it has paid for and accepted said goods, to make a claim against Seller on account of any goods which do not prove to be satisfactory or are defective, irrespective of Purchaser's failure to notify Seller or a rejection of non-conforming goods or revocation of acceptance thereof, or to specify with particularity any defect in non-conforming goods after rejection or acceptance thereof.

11. Seller warrants that all goods will be of the best quality and satisfactory to Purchaser in every particular, and agrees promptly and at his own expense, either to repair any part of the goods which during the first year of actual use in service proves defective or otherwise unsuitable for the purposes contemplated by this Purchase Order, or to replace such part of the goods by shipping to Purchaser a new part under the same terms as apply hereunder to the shipment of the original part. Seller shall also reimburse Purchaser for any costs incurred by Purchaser in connection with the repair and/or replacement of defective or unsuitable goods including without limitation the cost of materials necessarily damaged by such remedying or replacing of such defective or unsuitable goods. A similar warranty shall apply to any replacement parts.
12. Time is of the essence hereof. If Seller shall default in performance hereof or breach any of its obligations hereunder or if Seller becomes insolvent or a trustee or a receiver of Seller's business or assets is appointed by any court or if Seller shall make an assignment for the benefit of creditors, then in any of such events Purchaser may cancel this order in whole or in part by written or telegraphic notice to Seller, and Purchaser shall have no liability or obligation whatsoever to Seller by reason of or resulting from such cancellation, but at Purchaser's sole election it may pay Seller its actual direct out-of-pocket costs of performance hereunder to the date of such cancellation, as approved by Purchaser, in which event the goods or uncompleted portions of the goods shall be the property of Purchaser and Seller shall safely hold the same for a reasonable time subject to receipt of Purchaser's written shipping instructions or other disposition instructions.
13. In addition to and without prejudice to the right to cancel under Article II, Purchaser may terminate this order in accordance with the following provisions:
 - (a) If this order covers goods manufactured or fabricated to Purchaser's specifications, then at any time prior to delivery of all goods covered by this order Purchaser may terminate this order in whole or in part by written or telegraphic notice to Seller, and in such event the following provisions shall apply:
 - (i) Immediately upon receipt of such notice of termination or upon such other date as may be specified in said notice, Seller shall stop all work in connection with this order except as otherwise directed by Purchaser;
 - (ii) Purchaser shall pay and Seller shall accept as full compensation Seller's actual direct out-of-pocket costs to the date work is stopped, including Seller's reasonable expense in connection with termination of any sub-contracts, all as approved by Purchaser, plus 5% of such costs, provided, however, that in no event shall the total amount to be paid to Seller upon such termination plus payments previously made exceed that proportion of the aggregate total purchase price specified herein that the work actually performed hereunder to the date work is stopped bears to the entire work to be performed hereunder;
 - (iii) The goods or uncompleted portions of the goods shall be the property of Purchaser, and Seller shall safely hold the same for a reasonable time, subject to receipt of Purchaser's written shipping or other disposition instructions.

- (b) If the goods covered by this order are standard stock merchandise, Purchaser may terminate all or any part of the unshipped portion of this order at any time by written or telegraphic notice to Seller, and in such event Purchaser shall have no further obligation for cancellation charges or otherwise hereunder except to make payment, subject to other applicable terms hereof, for the goods actually shipped and in transit prior to such termination and to make payment for any goods as to which this order is not terminated which are shipped subsequent to such termination.
14. Seller shall indemnify and save Purchaser free and harmless from and against any and all claims, damages, liabilities or obligations of whatever kind, including but not limited to damage or destruction of property and injury or death of persons, resulting from or connected with Seller's performance hereunder or any default by Seller or breach of its obligations hereunder.
 15. This Purchase Order, together with any written documents which may be incorporated by specific reference, constitutes the entire agreement between the parties and supersedes all previous communications between them, either oral or written. All such previous communications are hereby abrogated and withdrawn, and no stipulations, representations or agreements by Purchaser or any of its officers, agents or employees shall be binding on the Purchaser unless contained in this Purchase Order or incorporated herein by reference as above provided and no local, general or trade custom or previous course of dealing or performance shall alter or vary the terms hereof.
 16. The waiver by Purchaser of any term, condition or provision herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any provision in any subsequent order.
 17. Purchaser will not be responsible for delay in receipt of Seller's invoices and required supporting documents. Should delay occur, time allowed by the Seller for payment of invoices or for accepting a cash discount offered, shall commence on the date invoices, complete with any required supporting documents, are received by Purchaser.
 18. The laws of the State of Ohio shall govern the validity, interpretation and enforcement hereof.
 19. All plans, drawings, specifications and the subject matter contained therein and all other information given to Seller in connection with performance of this Purchase Order involve valuable proprietary rights of Purchaser and Engineer and shall be held confidential by Seller, shall remain the property of Purchaser and Engineer and shall not be used by Seller for any purposes other than those for which they have been supplied or prepared. Seller agrees that, as far as possible, it will keep confidential the making of this Order and the terms hereof. Seller agrees not to use for publicity purposes any photographs, drawings and/or materials in connection with the performance of this Order without obtaining the prior written consent of Purchaser and upon completion of this Order, Seller shall return all material given Seller as aforesaid.
 20. Seller shall take adequate measures to accomplish all elements of work required in connection with this Purchase Order within time limits which are compatible with the Schedule set forth in this Purchase Order, if any; and if no Schedule is included, within such time limits as are compatible with the shipping date specified therein. Such measures shall include, without limitation, expediting of its subcontractors for engineering and fabrication and expediting of its suppliers for materials and parts. Failure by Seller to perform all such activities so as to maintain scheduled completion of the order shall be considered a breach by Seller of its obligations under this Purchase Order. If required by Purchaser, Seller shall furnish a progress report each month which will show the scheduled start and completion dates and the percent completion for each of the following basic activities:
 - (a) Drawings and Technical Data (required for approval)
 - (b) Materials and Parts (required for manufacture)
 - (c) Production
 - (d) Scheduled to Ship
- Seller shall also provide Purchaser's expediting representatives such information as they may request concerning the Seller's program and schedule for the Purchase Order and shall accord the Purchaser's expediting representative full cooperation for their review and observation of Seller's engineering, materials acquisition and production activities at Seller's facilities as well as at the facilities of Seller's suppliers and subcontractors. If Purchaser determines that Seller is not meeting the requirements of the Schedule, Seller shall take such action as may be required by Purchaser to enable Seller to comply with the requirements of the Schedule.
21. Purchaser may at any time or from time to time issue written instructions requiring additions, changes, deletions or alterations in the work to be performed under this Purchase Order. Seller will proceed with the work as instructed immediately if requested to do so by Purchaser in writing. Within ten days after receipt of said instructions, Seller shall furnish to Purchaser a statement in detail of its estimate of the net increase or decrease in cost resulting from its compliance with said instructions. Failure to furnish said statement within the prescribed time shall be deemed to be the equivalent of the statement that there is no increase in cost. Purchaser will consider the statement as submitted and upon the basis thereof and of other such matter as may be relevant will determine the amount of increase or decrease in the Purchase Order price and shall issue a change order hereto providing for any such increase or

decrease in the Purchase Order price. If Seller objects to Purchaser's determination, it will so notify Purchaser in writing within ten days after receipt or acceptance of Purchaser's change order. If the Seller and Purchaser do not agree upon the increase or decrease, either party may pursue its legal remedies. Seller will continue to perform the work, including any such additions, changes, deletions or alterations despite any failure to agree upon the increase or decrease in the Purchase Order price, unless otherwise directed by Purchaser.

22. In the event drawings submitted by Seller are incomplete or otherwise fail to meet the requirements of the Purchase Order, Purchaser shall notify Seller of such deficiencies. If Seller fails to promptly correct such deficiencies, Purchaser may make such corrections and any engineering time expended by Purchaser in making such corrections will be accumulated and the cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order.
23. In the event of delay to Seller resulting from the acts of omission or commission of Purchaser or resulting from the acts of God, strikes, fire, or other causes beyond Seller's reasonable control, Seller shall be entitled to an extension of time by the amount of time he is actually delayed thereby in the performance of the work, provided notice is given as hereinafter provided. Seller shall not be entitled to, and hereby waives any and all claims to, increased compensation for, or damages which he may suffer from any such causes. Seller shall not be entitled to any such extension of time for delays from any such causes unless he notifies Purchaser, in writing, within five days of the commencement of each such cause or the occurrence thereof, of the probable duration thereof, together with essential supporting data and thereafter promptly gives written notice of the termination thereof and requests an extension of time. If approved by Purchaser, a written extension of time for completing the work shall be granted for the period reasonably justified.
24. Non-Discrimination: During the performance of the Purchase Order and to the extent that Executive Order No. 11246 may be applicable to this Purchase Order, the Seller agrees as follows:
 - (a) The Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - (b) The Seller will, in all solicitations or advertisements for employees placed by or on behalf of the Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
 - (c) The Seller will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Seller's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (d) The Seller will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (e) The Seller will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Commission and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (f) In the event of the Seller's non-compliance with the non-discrimination clauses of this Purchase Order or with any of such rules, regulations, or orders, this Purchase Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
 - (g) The Seller will include the provisions of paragraph (a) through (f) hereof in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance, provided that, in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Seller may request the United States to enter into such litigation to protect the interests of the United States.

Оценки

Weld Filler Material - Purchase Check List

Date 7/26/79
2 of 2

(See Note Below:)

Vendor CHEMETRON CORP./ALLOY RODS DIVISION

KEI P.O. 7070-35720

Address P.O. Box 517

Requested by _____

Hanover, Pennsylvania 17331

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b - 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by E. H. Martin

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENTP.O. BOX 201
Moscow, Ohio 45153

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light CompanyPURCHASE
ORDER NO. 7070-37567

SHEET 1 OF 2 SHEETS

THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

Date: 2/20/80

SELLER

Wright Brothers, Inc.
1930 Losantiville Rd.
Cincinnati, Ohio 45237

Attention:

Phone: 731-8247

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:EXHIBIT "A" - SPECIFICATION NO.
EXHIBIT "B" - TERMS AND CONDITIONS
EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: ASAP

TERMS OF PAYMENT: Net 30

PRICE POLICY:

POINT OF ORIGIN:

F.O.B. POINT:

Jobsite

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
			Phase II Piping - "Essential Nuclear Material"			
1.	2000	Lbs.	E7018 1/8" coated welding electrode	\$.502	\$ 1004.00	7811.9834.31
2.	3000	Lbs.	E7018 3/32" coated welding electrode	.737	2211.00	
			Material to be in accordance with ASME Code SFA 5.1 (see attached purchase check list) with full Nuclear Certification and packaged in 10# hermetically sealed cans.			
			Material to be supplied by McKay an approved KEI Supplier.			
			CONFIRMING DO NOT DUPLICATE Packing List Must Be Forwarded With Each Shipment INSPECT TO INSTRUCTION KEI QAK/113 QAE <i>[Signature]</i> 2-26-80			
			SALES OR USE TAX EXEMPTION			
			THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS 190002298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 90000348 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 90000406 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.			
			TOTAL OF ORDER		3,215.00	

REQ 35240, 35241 SPEC.
NO. NO.PROJECT W. Puckett
ENGINEERKC:lc
2/21/80
Kmc

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light CompanyAUTHORIZED SIGNATORY
*[Signature]*Materials or services supplied on this purchase order
shall comply with provisions of NRC Regulation 10 CFR
Part 21, Certification and Reporting of Defects and Non-
conformances.

Weld Filler Material - Purchase Check List

Date January 21, 1980
2 of 2

(See Note Below:)

Vendor _____

KEI P.O. _____

Address _____

Requested by _____

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3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief _____	3. Test 8A X-Ray _____	3. Mill Test Report _____
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7. Mill Test Reports ☒	7. Mill Test Reports _____		
		1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____
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3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W.O. Puckett

TERMS AND CONDITIONS

THIS PURCHASE ORDER IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

In the event Seller's Quotation, acknowledgment, confirmation, invoice or other form states terms additional to or different from those set forth herein, this Purchase Order shall be deemed a notification of objection to such additional and/or different terms and a rejection thereof. This Purchase Order constitutes an offer to purchase, and not an acceptance of any offer to sell, the goods and any services described herein which may be accepted only in accordance with its terms and without modification, addition, deletion or alteration. In the absence of written acceptance or other written confirmation hereof by Seller, the commencement of any work by Seller in pursuance of this order or the making of any deliveries by Seller of the goods and services described herein shall be deemed an acceptance hereof and a contract shall be formed only upon the terms and conditions set forth herein.

1. As used herein, the term "Purchaser" means the party designated as such on the face of this purchase order; the term "Seller" means the party designated as such on the face of this order, and the term "Engineer" means Sargent and Lundy.
2. This purchase order, when properly signed by Purchaser and bearing an order number, is the only authorization which will be recognized by Purchaser for charges to its account.
3. Neither the quantity nor quality of the goods delivered by Seller to Purchaser shall differ from those specified on the face hereof, nor shall any other modifications of this purchase order be effective unless such changed quantity or other modification is first ordered by Purchaser by written change order. Seller shall make no shipment of non-conforming goods, whether as an accommodation or otherwise, unless first authorized in writing by Purchaser.
4. Seller shall properly package all goods for safe shipment to the Purchaser and a notice of shipment shall be sent by Seller to Purchaser at the time the goods described herein are shipped which shall state the number of the order, the kind of goods, the Seller's name and the carrier and route by which the shipment is being made.
5. Seller warrants that any transportation costs included in the price will not exceed actual transportation costs paid by Seller. If this order calls for payment of any transportation costs by Purchaser, Purchaser shall in no event be liable or accountable for any amount in excess of the actual costs of transportation. Seller shall be accountable for and pay any excess transportation costs arising from Seller's failure to make delivery to the F.O.B. point or to follow shipping instructions furnished by Purchaser.
6. In placing this Purchase Order, Purchaser is relying on Seller's skill and judgment in selecting and providing the proper goods and any applicable services for Purchaser's particular use. Seller warrants to Purchaser and its successors in interest that the goods and any services covered hereby will correspond with the description of the same on the face of this order, will conform to any applicable specifications, shall be new and of the best quality unless otherwise specified, and will be fit for the purpose for which they are furnished. Seller also warrants that said goods are free and clear of all liens and encumbrances whatsoever and that Seller has a good and marketable title to same, and Seller agrees to hold Purchaser free and harmless against any and all claims to said merchandise.
7. Seller represents that it has fully investigated all specifications, including any furnished by Purchaser, in connection with the goods, and based on such investigation and its past experience and superior knowledge with respect to such goods, has determined that the production thereof will not infringe any patent, trademark, trade secret or copyright. Seller warrants to Purchaser and its successors in interest that the sale or use of the goods and any services covered by this order, whether manufactured in accordance with Purchaser's specification or otherwise, do not and will not infringe upon any patent, trademark, trade secret or copyright and Seller shall defend, indemnify and hold Purchaser and its successors in interest free and harmless from and against any and all claims, demands, costs and liabilities, including legal expenses, arising out of any such infringement or claim of infringement. Purchaser is relying upon the experience, skill and superior knowledge of Seller with respect to the goods and makes no representation that Seller will be safe in manufacturing the goods as required under this order. In no event shall Purchaser or its successors in interest be liable to Seller for any patent, copyright, trade secret or trademark infringement or claim thereof. In the event Purchaser and/or its successors in interest is or are enjoined from the operation, use and/or sale of the goods or any services, or any part thereof, covered by this order, Seller shall (at its sole expense) take all reasonable steps possible to procure for Purchaser and its successors in interest the right to operate, use and sell said goods or any services, or any part thereof, covered by this order. If Seller cannot so procure the aforesaid right within a reasonable time, Seller shall then promptly (at Seller's sole expense):
 - (a) Modify said goods or services, or any part thereof, so as to avoid infringement of any patent or other proprietary interest, or
 - (b) Replace said goods or services, or any part thereof, with goods or services which do not infringe or violate any said patent or other proprietary interest, or
 - (c) Remove said goods or services, or any part thereof, and refund any compensation theretofore paid to Seller and pay to Purchaser any transportation costs and expenses that may have been paid or incurred by Purchaser in connection with the goods or any services, or any part thereof, so removed.

8. Seller shall assume and pay any and all loss or damage to the goods from any cause whatsoever until Purchaser takes delivery of the goods at the point of ultimate destination. Notwithstanding the foregoing or any terms of shipment, title to the goods shall pass from Seller to Purchaser when the goods are transferred at the point of origin to railroad, truck, or other transportation facility.
9. Seller warrants and agrees that all goods delivered pursuant to this order shall be produced, sold and delivered to Purchaser in compliance with and conforming to all applicable laws and governmental orders, rules and regulations, and that the prices for such goods are not in excess of any applicable price established by law or governmental regulation. Seller shall furnish to Purchaser upon request certificates or other evidence showing compliance with this Article.
10. Purchaser shall have the right to perform such examination, inspection and tests of equipment material and workmanship as he may desire to assure himself that the goods meet all specified requirements of the Purchase Order. The Seller shall upon reasonable notice permit unrestricted access to the Purchaser or his duly authorized representative(s) to his place of manufacture and to that of his sub-suppliers for the purpose of conducting such examination, inspection and tests at any and all times that the goods are in the process of manufacture, fabrication, assembly, testing or inspection. The Seller shall provide the Purchaser with sufficient, safe and proper facilities for the performance of said inspection.
- Inspection documents in the quality control files of the Seller and his sub-suppliers which relate to work performed under the Purchase Order shall be accessible for examination by the Purchaser.
- The Purchaser or his duly authorized representative shall have authority to reject materials or workmanship which are defective or not in accordance with the Purchase Order and to require their correction. Any material or work which is found defective or in nonconformance with the Purchase Order requirements, shall be satisfactorily corrected or replaced by the Seller without cost to the Purchaser.
- Notwithstanding any prior payment therefor, all goods are subject to inspection and testing by Purchaser after arrival at the ultimate destination, and if the goods are to be incorporated into a plant or other operating facility, Purchaser's inspection and testing of the goods may be made under operating conditions after the goods have been installed. If upon inspection or testing such goods or any portion thereof are found to be nonconforming, unsatisfactory, defective, of inferior quality or workmanship or fail to meet any guarantees or operating or other specifications contained herein or any other requirements of this Purchase Order, then without prejudice to any other rights or remedies, Purchaser may return the goods or any part thereof to Seller, and all amounts theretofore paid by Purchaser to Seller on account of the purchase price of such returned goods, together with any costs incurred by Purchaser in connection with the original delivery or return of such goods, shall be repaid to Purchaser by Seller. Neither the inspection nor failure to make inspection nor acceptance of goods shall release Seller from any of the warranties or other provisions of this order nor impair Purchaser's right to reject nonconforming goods. Purchaser reserves the right, even after it has paid for and accepted said goods, to make a claim against Seller on account of any goods which do not prove to be satisfactory or are defective, irrespective of Purchaser's failure to notify Seller or a rejection of nonconforming goods or revocation of acceptance thereof, or to specify with particularity any defect in nonconforming goods after rejection or acceptance thereof.
11. Seller warrants that all goods will be of the best quality and satisfactory to Purchaser in every particular, and agrees promptly and at his own expense, either to repair any part of the goods which during the first year of actual use in service proves defective or otherwise unsuitable for the purposes contemplated by this Purchase Order, or to replace such part of the goods by shipping to Purchaser a new part under the same terms as apply hereunder to the shipment of the original part. Seller shall also reimburse Purchaser for any costs incurred by Purchaser in connection with the repair and/or replacement of defective or unsuitable goods including without limitation the cost of materials necessarily damaged by such remedying or replacing of such defective or unsuitable goods. A similar warranty shall apply to any replacement parts.
12. Time is of the essence hereof. If Seller shall default in performance hereof or breach any of its obligations hereunder or if Seller becomes insolvent or a trustee or a receiver of Seller's business or assets is appointed by any court or if Seller shall make an assignment for the benefit of creditors, then in any of such events Purchaser may cancel this order in whole or in part by written or telegraphic notice to Seller, and Purchaser shall have no liability or obligation whatsoever to Seller by reason of or resulting from such cancellation, but at Purchaser's sole election it may pay Seller its actual direct out-of-pocket costs of performance hereunder to the date of such cancellation, as approved by Purchaser, in which event the goods or uncompleted portions of the goods shall be the property of Purchaser and Seller shall safely hold the same for a reasonable time subject to receipt of Purchaser's written shipping instructions or other disposition instructions.
13. In addition to and without prejudice to the right to cancel under Article II, Purchaser may terminate this order in accordance with the following provisions:
- (a) If this order covers goods manufactured or fabricated to Purchaser's specifications, then at any time prior to delivery of all goods covered by this order Purchaser may terminate this order in whole or in part by written or telegraphic notice to Seller, and in such event the following provisions shall apply:
 - (i) Immediately upon receipt of such notice of termination or upon such other date as may be specified in said notice, Seller shall stop all work in connection with this order except as otherwise directed by Purchaser;
 - (ii) Purchaser shall pay and Seller shall accept as full compensation Seller's actual direct out-of-pocket costs to the date work is stopped, including Seller's reasonable expense in connection with termination of any subcontracts, all as approved by Purchaser, plus 5% of such costs, provided, however, that in no event shall the total amount to be paid to Seller upon such termination plus payments previously made exceed that proportion of the aggregate total purchase price specified herein that the work actually performed hereunder to the date work is stopped bears to the entire work to be performed hereunder;
 - (iii) The goods or uncompleted portions of the goods shall be the property of Purchaser, and Seller shall safely hold the same for a reasonable time, subject to receipt of Purchaser's written shipping or other disposition instructions.

decrease in the Purchase Order price. If Seller fails to comply with Purchaser's determination, it will so notify Purchaser in writing within ten days after receipt of notification of Purchaser's change order. If the Seller and Purchaser do not agree upon the increase or decrease, either party may pursue its legal remedies. Seller will continue to perform the work, and, time and cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order, unless otherwise directed by Purchaser.

22. In the event drawings submitted by Seller are incomplete or otherwise fail to meet the requirements of the Purchase Order, Purchaser shall notify Seller of such deficiencies. If Seller fails to promptly correct such deficiencies, Purchaser may make such corrections and any engineering time expended by Purchaser in making such corrections will be accumulated and the cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order.
23. In the event of delay to Seller resulting from the acts of omission or commission of Purchaser or resulting from the acts of God, strikes, fire or other causes beyond Seller's reasonable control, Seller shall be entitled to an extension of time by the amount of time he is actually delayed thereby in the performance of the work, provided notice is given as hereinafter provided. Seller shall not be entitled to, and hereby waives any and all claims to, increased compensation for, or damages which he may suffer from any such causes. Seller shall not be entitled to any such extension of time for delays from any such causes unless he notifies Purchaser, in writing, within five days of the commencement of such such cause or the occurrence thereof, of the probable duration thereof, together with essential supporting data and thereafter promptly gives written notice of the termination thereof and requests an extension of time. If approved by Purchaser, a written extension of time for completing the work shall be granted for the period reasonably justified.
24. Non-Discrimination: During the performance of the Purchase Order and to the extent that Executive Order No. 11246 may be applicable to this Purchase Order, the Seller agrees as follows:
 - (a) The Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - (b) The Seller will, in all solicitations or advertisements for employees placed by or on behalf of the Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
 - (c) The Seller will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Seller's commitments under Section 102 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (d) The Seller will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (e) The Seller will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Commission and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (f) In the event of the Seller's non-compliance with the non-discrimination clauses of this Purchase Order or with any of such rules, regulations, or orders, this Purchase Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
 - (g) The Seller will include the provisions of paragraph (a) through (f) hereof in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 104 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for non-compliance, provided that, in the event the Seller is a result of such direction by the Commission, the Seller may request the United States to enter into such litigation to protect the interests of the United States.

- (b) If the goods covered by this order are standard stock merchandise, Purchaser may terminate all or any part of the unfinished portion of this order at any time by written or telegraphic notice to Seller, and in such event Purchaser shall have no further obligation for completion of such or any other goods hereunder except to make payment, subject to other applicable terms hereof, for the goods actually shipped and in transit prior to such termination and to make payment for any goods as to which this order is not terminated which are shipped subsequent to such termination.
14. Seller shall indemnify and save Purchaser free and harmless from and against any and all claims, damages, liabilities or obligations of whatsoever kind, including but not limited to damage or destruction of property and injury or death of persons, resulting from or connected with Seller's performance hereunder or any default by Seller or breach of its obligations hereunder.
15. This Purchase Order, together with any written documents which may be incorporated by specific reference, constitutes the entire agreement between the parties and supersedes all previous communications between them, either oral or written. All such previous communications are hereby abrogated and withdrawn, and no stipulations, representations or agreements by Purchaser or any of its officers, agents or employees shall be binding on the Purchaser unless contained in this Purchase Order or incorporated herein by reference as above provided and no local, general or trade custom or previous course of dealing or performance shall alter or vary the terms hereof.
16. The waiver by Purchaser of any term, condition or provision herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any provision in any subsequent order.
17. Purchaser will not be responsible for delay in receipt of Seller's invoices and required supporting documents. Should delay occur, time allowed by the Seller for payment of invoices or for accepting a cash discount offered, shall commence on the date invoices, complete with any required supporting documents, are received by Purchaser.
18. The laws of the State of Ohio shall govern the validity, interpretation and enforcement hereof.
19. All plans, drawings, specifications and the subject matter contained therein and all other information given to Seller in connection with performance of this Purchase Order involve valuable proprietary rights of Purchaser and Seller and shall be held confidential by Seller, shall remain the property of Purchaser and Seller and shall not be used by Seller for any purposes other than those for which they have been submitted or prepared. Seller agrees that, as far as possible, it will keep confidential the making of this Order and the terms hereof. Seller agrees not to use for publicity purposes any photographs, drawings and/or materials in connection with the performance of this Order without obtaining the prior written consent of Purchaser and upon completion of this Order, Seller shall return all material given Seller as aforesaid.
20. Seller shall take adequate measures to accomplish all elements of work required in connection with this Purchase Order within time limits which are compatible with the Schedule set forth in this Purchase Order, if any, and if no Schedule is included, within such time limits as are compatible with the shipping date specified herein. Such measures shall include, without limitation, expediting of its subcontractors for engineering and fabrication and expediting of its suppliers for materials and parts. Failure by Seller to perform all such activities so as to maintain scheduled completion of the order shall be considered a breach by Seller of its obligations under this Purchase Order. If required by Purchaser, Seller shall furnish a progress report each month which will show the scheduled start and completion dates and the percent completion for each of the following basic activities:
- (a) Drawings and Technical Data (required for approval)
 - (b) Materials and Parts (required for manufacture)
 - (c) Production
 - (d) Scheduled to Ship
- Seller shall also provide Purchaser's expediting representatives such information as they may request concerning the Seller's program and schedule for the Purchase Order and shall accord the Purchaser's expediting representative full cooperation for their review and observation of Seller's engineering, materials acquisition and production activities at Seller's facilities as well as at the facilities of Seller's suppliers and subcontractors. If Purchaser determines that Seller is not meeting the requirements of the Schedule, Seller shall take such action as may be required by Purchaser to enable Seller to comply with the requirements of the Schedule.
21. Purchaser may at any time or from time to time issue written instructions requiring additions, changes, deletions or alterations in the work to be performed under this Purchase Order. Seller will proceed with the work as instructed immediately if requested to do so by Purchaser in writing. Within ten days after receipt of said instructions, Seller shall furnish to Purchaser a statement in detail of its estimate of the net increase or decrease in cost resulting from its compliance with said instructions. Failure to furnish said statement within the prescribed time shall be deemed to be the equivalent of the statement that there is no increase in cost. Purchaser will consider the statement as submitted and upon the basis thereof and of other such matter as may be relevant will determine the amount of increase or decrease in the Purchase Order price and shall issue a change order hereon providing for any such increase or

**KAISER
ENGINEERS**

HANDWRITTEN INTEROFFICE MEMORANDUM

TO: W. Ferree DATE: March 28, 1980
AT: Moscow, Ohio FROM: W. O. Puckett
COPIES TO: File AT: _____
JOB NO. 7070
SUBJECT: E7018 Covered electrode, which was damaged in transport. P.O. 37587

On March 27, 1980, W. O. Puckett, Chief Welding Engineer, opened and examined one can of the above mentioned damaged electrode, upon delivery to the Rod Shack.

Rod examined, was found to be satisfactory and it is my opinion any of the other rod, in the same shipment is acceptable, providing the electrode is found in the same condition, after opening.

Rod Shack attendants have been instructed to examine each can to insure the flux has not been cracked or chipped before placing in holding ovens.

W. O. Puckett
W. O. Puckett
Chief Welding Engineer

WOP/jrt

REASON FOR SHIPMENT:
RETURN FOR CREDIT:
RETURN FOR REPAIR:
RETURN FOR REPLACEMENT:
RETURN FOR MARKING:
SHIPPED FOR FABRICATION:
SHIPPED FOR TESTING:

KAISER ENGINEERS, INC.
MOSCOW, OHIO

SHIPPING ORDER NO. 5466
KAISER ENGINEERS
PURCHASE ORDER NO. 7070-37587
KAISER ENGINEERS
MATERIAL RECEIPT NO. 61217 "A"

TO BE RETURNED: YES NO

Shipped to WRIGHT BROS. INC.

Authorized By: M. DICKETT / K. COLLINS

Address 1930 COSANTIVILLE RD.

CINTI, OHIO

Date 3-28-80

Shipped From ZIMMER STATION
MOSCOW, OHIO

By H. J. K. Co.

B/L No.

Truck Line VENDOR

Express

Parcel Post

Water

Prepaid
Collect[illegible]

NO. OF PIECES: 1 CAN ESTIMATED WEIGHT: 50 LBS.

Received the above described materials this 25 day of Aug 19 80

REMARKS:

FOR:

32

Required Delivery RUSH-ASAP-PLEASE

HENRY J. KAISER COMPANY

Type of Quotation: Verbal ☐ Written ☐

Engineering Review Required ☐

Approval prior to award required ☐

INQUIRY, REQUISITION, & RECOMMENDATION TO PURCHASE

ESSENTIAL

Inq/Req No. 7070-35241
Date January 21, 1980
Material Welding Rod

To be used for				Coded by	Bid No.		Bid No.		Bid No.		
PHASE II PIPING					None		Welder		Chic Valley		WV
Station							Ally				
S. SPANGENBERG							Welder		Chic Valley		
Item No.	Quantity	Unit	Description Give Complete Data-Drawing Number, Etc.	Account Number	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	Unit Price
1	3,000	lbs.	#E7018 - 3/32" Coated welding electrode in accordance with ASME Code SFA 5.1 with full nuclear certification and packaged in 10% hermetically sealed cans.	7311933431	.774	2322.00	.74	2220.00	1.14	3420.00	

Hyrex Preferred
W.C. PUCKETT 2/14/80

Originator <u>W.C. PUCKETT 1-21-PO</u>		Approved <u>[Signature]</u>		Total <u>2322.00</u>	<u>2220.00</u>	<u>3420.00</u>
Item No.	Purchase Order or Sub Contract Recommendation To Be Placed With	P. O. No.	F. O. B.	Terms	Terms	Terms
	<u>Wright Bros.</u>	<u>7070-</u>		<u>Net</u>	<u>Net</u>	<u>Net</u>
			Shipping	<u>4 weeks</u>	<u>3-4 weeks A/D</u>	<u>5 weeks</u>
		<u>37587</u>	Shipping Point			
			Price Policy			

TO BE PURCHASED
FROM APPROVED VENDOR
ONLY. [Signature] 1-22-80

Quality Assurance Requirement

(See reverse side of

Requisition

QAW 113

Q No Q. A. Requirement

Q No Q. A. Manager

Reason Supplier

Selected

(1) Lowest Price

(2) Required Design

(3) Only Source Known

(4) Early Delivery

(5) Conformance to Q. A. Requirement

Reason

Prepared By [Signature] ed By [Signature]

Purchasing Agent [Signature] ing Agent

APPROVED [Signature] OVED

Procurement Mgr. [Signature] nment Mgr.

Administrative Mgr. [Signature] nistrative Mgr.

Project Mgr. [Signature] t Mgr.

Owner [Signature]

Weld Filler Material - Purchase Check List

Date January 21, 1980
2 of 2

(See Note Below:)

Vendor _____
Address _____

KEI P.O. _____
Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded _____	2. Weld Dep. Ferrite _____	2. All Weld Metal Tensile-as welded _____
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief _____	3. Test 8A X-Ray _____	3. All Weld Metal Tensile-stress relief _____
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded _____	4. Mill Test Report _____	4. All Weld Metal Impact-as welded _____
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief _____	SFA 5.9 Stainless Steel Bare Wire	5. All Weld Metal Impact-stress relief _____
6. Test X-Ray ☒	6. Test X-Ray _____	1. Weld Dep. Chem. _____	6. Test X-Ray _____
7. Mill Test Reports ☒	7. Mill Test Reports _____	2. Weld Dep. Ferrite _____	7. Mill Test Report _____
		3. Mill Test Report _____	8. 10# Tube _____
		4. 10# Tube _____	9. Tagged both ends _____
		5. Tagged Both ends _____	

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2431.2b- 3 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W.O. Puckett

Weld Filler Material - Purchase Check List

Date January 21, 1980

2 of 2

(See Note Below:)

Vendor _____
Address _____KEI P.O. _____
Requested by W.D. Puckett

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded _____	2. Weld Dep. Ferrite _____	2. All Weld Metal Tensile-as welded _____
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief _____	3. Test 2A X-Ray _____	3. All Weld Metal Tensile-stress relief _____
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded _____	4. Mill Test Report _____	4. All Weld Metal Impact-as welded _____
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief _____	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray _____	1. Weld Dep. Chem. _____	5. All Weld Metal Impact-stress relief _____
7. Mill Test Reports ☒	7. Mill Test Reports _____	2. Weld Dep. Ferrite _____	6. Test X-Ray _____
		3. Mill Test Report _____	7. Mill Test Report _____
		4. 10# Tube _____	8. 10# Tube _____
		5. Tagged Both ends _____	9. Tagged both ends _____

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2431.2b - 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaeffer Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W.D. Puckett

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT

P.O. BOX 201
MOSCOW, OHIO 45153

PHONE:
CABLE: KAISENGS
TELEX:

HENRY J. KAISER COMPANY

Agent For
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

CHANGE NO. "A"
PURCHASE
ORDER NO. 7070-37587

SHEET 1 OF 1 SHE
THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

PURCHASE ORDER CHANGE

DATE	TO BE SHIPPED
3/28/80	N/A

SELLER

Wright Brothers, Inc.
1930 Losantiville Rd.
Cincinnati, Ohio 45237

Attention:

Phone: 731-8247

WORK ORDER NO. 57300

ITEM NO.

PLEASE MAKE THE FOLLOWING CHANGES IN THE ABOVE PURCHASE ORDER DATED 2/20/80

QA APPROVED
QA RECEIVING INSPECTION
REQUIRED ☐ NOT REQUIRED ☒
KEI QA ENGINEER

INSPECT TO INSTRUCTION

KEI *QAW 113*

QAE *Account 41-80*

ESSENTIAL

7811.9834.31

This change is issued to change item 1 to read:

Item
1 1,950 lbs. E7018 1/8" coated welding
electrode.

\$.502 \$978.90

All other terms and conditions of original order remain unchanged.

Materials or services supplied on this purchase order
shall comply with provisions of NRC Regulation 10 CFR
Part 21, Notification and Reporting of Defects and Non-
compliances.

All goods furnished under this order shall fully comply
with all applicable health and safety laws, rules, and
regulations including without limitation, the Occupational
Safety and Health Act of 1970 and its rules and regula-
tions listed on page 10, etc.

CONFIRMATION OF ORDER DATE

Packing 1 - 10 included

SALES OR USE TAX EXEMPTION With Bill of Materials

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, STATE, LOCAL, EX-
CISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT
SALES AND USE TAX WHICH SHALL BE ASSUMED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT
OBLIGATION. PREVIOUS RECORDS ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY, PREVIOUS RECORDS ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY, AND RECORDS ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.

Previous P.O. Total: \$3,215.00
Change "A" Decrease: (25.10)

REVISED TOTAL
OF ORDER \$3,189.90

INVOICE PURCHASER

PURCHASER

HENRY J. KAISER COMPANY

Agent For

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

REQ. NO. 35240 SPEC. NO.

AND MAIL FIVE (5) COPIES WITH
ORIGINAL BILL OF LADING TO

PROJECT ENGINEER W.O. Puckett

KMC:bc
3/31/80 KMC

HENRY J. KAISER COMPANY
P.O. Box 201
MOSCOW, OHIO 45153

AUTHORIZED SIGNATORY

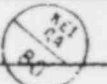
Purchasing Agent

WM. H. ZIMMER NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. SFA 5.1 E 7018
 Component Name Weld Filler Material
 Supplier WRIGHT BROTHERS, INC Prepared By J. Deerwester

PO No. 7070-37587
 MR No. 61217
 Inspection Plan No. QAW 113
 Page 1 of 1
 Date 5-14-76 REV. 1

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.	Visual		3-17-80	
2	Proper marking, per code specification, on individual containers including SFA specification. Record Heat Nos., Lot No. by size. <u>1/8" H/T # 41252801 - Lot # 30918</u> <u>3/32" H/T # 40151571 - Lot # 29924</u>	Visual		3-17-80	
3	Tagged (Both ends as required).	Visual	N/A	3-17-80	
4	Received from KEI approved supplier (applies to manufacturer and distributor).			3-17-80	
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).	Visual		3-17-80	
6	Dimensional, except sealed material. Do not open sealed cans.		N/A	3-17-80	

APPROVED:

M. J. Friedrich
 QA Manager

APPROVED FOR FILING:

J. Deerwester
 QAE

3-17-80
 DATE

HENRY J. KAISER COMPANY

Moscow, Ohio

MATERIAL RECEIVED REPORT

THIS ORDER IS:

COMPLETE ☐
 NOT COMPLETE ☒
 REC. DAMAGED ☐

M.R. NO.: 61217

PAGE 1 OF 1

P. O. NO.: 7070-37587

REQ. NO.: 7070-35240/35241

DAMAGE REPORT NO. N/A DATE RECEIVED: 3-6-80

ORDERED FROM: WRIGHT BROTHERS, INC.

CINCINNATI, OHIO

SHIPPED BY: MCKAY

YORK, PA.

SHIPPED TO: JOBSITE PACKING SLIP NO.: 85637

VIA: WILSON FREIGHT F.O.B. POINT: JOBSITE

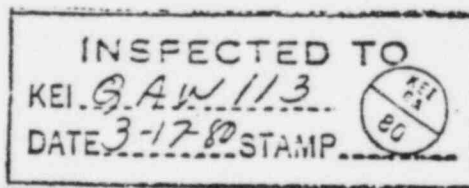
CARRIER	WILSON FREIGHT
FREIGHT BILL	NO. 7476653
EXPRESS BILL	WGT. 6266
PARCEL POST	DATE 3-6-80
PREPAID	AMT. \$ 210.04
COLLECT	AMT. \$
RAILLINE	
CAR NO.	
DOCK NO.	

P.O. ITEM NO.	QUANTITY	UNIT	DESCRIPTION	LOCATION	ACCOUNT NO.
			PHASE II PIPING - "ESSENTIAL NUCLEAR MATERIAL"		
1	2000*	Lbs.	E7018 1/8" coated welding electrode Ht. #412J-2801	Compound	7811.9834.31
2	3015*	Lbs.	E7018 3/32" coated welding electrode Ht. #401J-1571		
			*300 lbs. of item 1 is to be returned to vendor per MSR 5466, also 180 lbs. of item 2 is to be returned to vendor per MSR 5466.		
			Material is to be returned to vendor because it was damaged. No damage report will be made.		
			The material will be replaced at vendors expense.		

DWG. NO. _____

B M O. _____

REQ. ORIGINATOR W. Puckett



QUALITY ASSURANCE INSPECTOR

Belinda Stone 3-14-80

CHECKED BY

ASST. WHSE. SUPT.

WAREHOUSE SUPT.

MATERIAL TEST REPORT

Page 1 of 2

2/29/80



ASME QUALITY SYSTEM CERTIFICATE (MATERIALS)
NUMBER N-1442 EXPIRES 7-16-82

Welding Products Division
P.O. Box 1509
York, Pa. 17405
Telephone: 717-845-7581
Telex: 84-0428

Wright Brothers Inc.
1920 Losantiville Rd.
Cincinnati, OH 45237

Your Order No 170-B
Marked For 37587
37588
Our Order No 85637
Date Shipped 2/29/80

Material Description and Specifications

Item	Weight, lb	Size, in	Classification	Coating
1	3,015	3/32"	E7018	McKay 7018
2				
3				
4				

Item	* Heat No	* Lot No	Specification	Lab Test No
1	401J1571	29924	AWS A5.1-78; ASME Section II Part C SFA5.1 (1977 Edition) Winter 1979 Addenda	9076-4737
2				
3				
4				

Chemical Analysis:

ACTUAL WELD METAL

Item	% C	% Mn	% P	% S	% Si	% Cr	% Ni	% Mo	% V	% Cb	% Cu	% H ₂ O
1	.051	1.03	.006	.014	.32	.07	<.03	.04	.025		.03	.336
2												
3												
4												

Mechanical Properties

ACTUAL WELD METAL

Item	Tensile, psi	Yield, psi	% El	% RA	
1	86,000	72,000	31.0	76.0	As Welded
2	81,000	67,000	33.0	76.0	Stress Relieved @ 1125°F ± 25°F for 8 Hrs.
3					
4					

See Supplementary Data Sheet For Additional Information

WE CERTIFY THE ABOVE MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH TELEDYNE MCKAY'S ASME QUALITY SYSTEM PROGRAM AND TESTED TO THE REQUIREMENTS OF NB-2000 AND NB-2400, SECTION III (1977 EDITION), INCLUDING WINTER 1979 ADDENDA, CLASS I COMPONENTS, OF THE ASME BOILER AND PRESSURE VESSEL CODES.

ALL WELDING DONE WITH DCRP.

*Each container is identified by heat and lot number.

cpr



3-11-80

We hereby certify that the chemical analyses and/or test results shown in this report are correct as contained in the records of the company.

Sworn and Subscribed before me this _____ day of _____

_____, 19_____, Notary Public
My commission expires _____ Spring Garden Two York Co

TELEDYNE MCKAY

Michael W. Elliott
Authorized Signature Ass't Manager Quality Assurance

MATERIAL TEST REPORT

SUPPLEMENTARY DATA

Page 2 of 2

TELEDYNE MCKAY

2/29/80
Welding Products Division
P.O. Box 1509
York, Pa. 17405
Telephone: 717-845-7581
Telex: 84-0428

Your Order No. 170-B

Our Order No. 85637

Size, in.	Classification	Coating	Heat No.	Lot No.
3/32"	E7018	McKay 7018	401J1571	29924

CHARPY V-NOTCH IMPACTS @ -20°F

As Welded

Specimen No.	Ft. Lb.	Lateral Expansion, in.	% Ductile Fracture
1	x 102.0	.061	100
2	x 95.4	.060	100
3	101.2 ✓	.058	100
4	98.3 ✓	.059	100
5	96.9 ✓	.064	100
Average *	98.8 ✓	.060	100

Stress Relieved @ 1125°F ± 25°F for 8 Hrs. ✓

Specimen No.	Ft. Lb.	Lateral Expansion, in.	% Ductile Fracture
1	x 70.1	.045	100
2	109.2 ✓	.071	100
3	x 117.9	.090	100
4	117.9 ✓	.078	100
5	117.9 ✓	.086	100
Average *	115.0 ✓	.078	100

*The extreme high and low values (x) were disregarded for the calculation of the average.

FILLET WELD USABILITY TEST

Current	Amps	Position of Welding	Size of Fillet	Convexity	Variation in Leg Length
DC	85	Vertical	9/64"	0	1/64"
DC	70	Overhead	11/64"	Flat	3/64"

There was no weld metal cracking, surface porosity, undercut or overlap.
Root Penetration - 100%

RADIOGRAPHIC TEST - Actual X-Ray Results Satisfactory ✓

ACTUAL CONCENTRICITY (%) - 2.1 (.0026" Avg. Ecc.)

3-11-80

We hereby certify that the above material has been tested in accordance with the listed specifications and conforms to all applicable requirements thereof.

TELEDYNE MCKAY

Michael W. Anello
Authorized Signature ASst. Manager of Quality Assurance

MATERIAL TEST REPORT

Page 1 of 2

4DJ2801

2/29/80



ASME QUALITY SYSTEM CERTIFICATE (MATERIALS)
NUMBER N-1442 EXPIRES 7-16-82

Welding Products Division
P.O. Box 1509
York, Pa 17405
Telephone: 717-845-7581
Telex: 84-0428

Wright Brothers Inc.
1920 Losantiville Rd.
Cincinnati, OH 45237

Your Order No 170-B
Marked For 37587
37588
Our Order No 85637
Date Shipped 2/29/80

Material Description and Specifications				
Item	Weight, lb.	Size, in.	Classification	Coating
1	2,000	1/8"	E7018	McKay 7018
2				
3				
4				
Item	* Heat No	* Lot No	Specification	Lab Test No
1	412J2801	30918	AMS A5.1-78; ASME Section II, Part C SFA5.1 (1977 Edition) Winter 1979 Addenda	9076-4761
2				
3				
4				

Chemical Analysis: ACTUAL WELD METAL												
Item	% C	% Mn	% P	% S	% Si	% Cr	% Ni	% Mo	% V	% Co	% Cu	% H ₂ O
1	0.47	1.13	0.008	0.017	0.50	0.08	0.01	0.04	0.026		0.03	0.081
2												
3												
4												

Mechanical Properties: ACTUAL WELD METAL				
Item	Tensile, psi	Yield, psi	% El	% RA
1	83,000	70,000	31.0	62.0
2	80,000	68,000	37.0	77.0
3				
4				

As Welded
Stress Relieved @ 1125°F ± 25°F for 8 Hours.

See Supplementary Data Sheet for Additional Information.

WE CERTIFY THE ABOVE MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH TELEDYNE MCKAY'S ASME QUALITY SYSTEM PROGRAM AND TESTED TO THE REQUIREMENTS OF NB-2000 AND NB-2400, SECTION III (1977 EDITION), INCLUDING WINTER 1979 ADDENDA, CLASS I COMPONENTS, OF THE ASME BOILER AND PRESSURE VESSEL CODES.

ALL WELDING DONE WITH DCRP.

*Each container is identified by heat and lot number.

cpr

3-11-80

We hereby certify that the chemical analyses and/or test results shown in this report are correct as contained in the records of the company.

Sworn and Subscribed before me this _____ day of _____

_____, 19____ Notary Public

My commission expires _____ Spring Garden Twp. York Co

TELEDYNE MCKAY

Michael L. Bellott
Authorized Signature Asst Manager Quality Assurance

MATERIAL TEST REPORT

SUPPLEMENTARY DATA

Page 2 of 2

2/29/80

TELEDYNE MCKAY

Welding Products Division
P.O. Box 1509
York, Pa. 17405
Telephone: 717-845-7881
Telex: 84-0428

Your Order No. 170-B

Our Order No. 85637

Size, in.	Classification	Coating	Heat No.	Lot No.
1/8"	E7018	McKay 7018	412J2801	30918

CHARPY V-NOTCH IMPACTS @ -20°F

As Welded

Specimen No.	Ft. Lb.	Lateral Expansion, in.	% Ductile Fracture
1	91.1	.060	100
2	x 112.1	.073	100
3	86.8	.056	100
4	x 85.3	.058	100
5	91.8	.064	100
Average *	89.9	.060	100

Stress Relieved @ 1125°F ± 25°F for 8 Hours

Specimen No.	Ft. Lb.	Lateral Expansion, in.	% Ductile Fracture
1	71.6	.049	100
2	x 40.5	.028	100
3	62.9	.045	100
4	89.7	.067	100
5	x 114.2	.075	100
Average *	74.7	.054	100

*The extreme high and low values (x) were disregarded for the calculation of the average.

FILLET WELD USABILITY TEST

3-11-80

Current	Amps	Position of Welding	Size of Fillet	Variation in Leg Length	Convexity
DC	125	Vertical	3/16"	1/16"	1/64"
DC	140	Overhead	3/16"	1/32"	1/32"

There was no weld metal cracking, surface porosity, undercut or overlap.
Root Penetration - 100%

RADIOGRAPHIC TEST - Actual X-Ray Results:
Satisfactory

We hereby certify that the above material has been tested in accordance with the listed specifications and conforms to all applicable requirements thereof.

ACTUAL CONCENTRICITY (%) - 3.8 (.0065" Avg. Ecc.)

TELEDYNE MCKAY

Michael W. Shultz
Authorized Signature Assoc. Manager of Quality Assurance

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENT

P. O. BOX 201
MOSCOW, OHIO 45153

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

PURCHASE
ORDER NO. 7070-39075

SHEET 1 OF 2 SHEETS
THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

Date: 9/5/80

SELLER

Wright Brothers Inc.
1930 Losantiville Road
Cincinnati, Ohio 45237

Attention:

Phone: 731-8247

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:

EXHIBIT "A" - SPECIFICATION NO.
EXHIBIT "B" - TERMS AND CONDITIONS
EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: 9/29/80

TERMS OF PAYMENT: Net

PRICE POLICY:

POINT OF ORIGIN:

F.O.B. POINT:

Jobsite

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
1	2,000	Lbs.	Welding #E7018 - 1/8" Coated welding electrode in accordance with ASME code SFA 5.1 (see attached sheet), with full nuclear certification and packaged in 50# hermetically sealed cans Material to be supplied by McKay, an approved H.J. Kaiser Supplier.	\$.555/ lb.	\$1110.00	7811.9834.31

Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation 10 CFR Part 21, Notification and Reporting of Defects and Non-compliances.

SALES OR USE TAX EXEMPTION:

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS 19800298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 9800343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000406 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.

CONFIRMING-DO NOT DUPLICATE
Packing list must be included
With Each Shipment

ESSENTIAL

INSPECT TO INSTRUCTION
KEI GAW 113
9-16-80

TOTAL OF ORDER \$ 1110.00

REQ. NO. 36678

SPEC. NO.

PROJECT ENGINEER

W. O. Puckett

KMC:be

9/15/80

KMC

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTHORIZED SIGNATORY

(See Note Below:)

Vendor Wright Brothers, Inc.
Address 1930 Losantiville Rd. Cincinnati, Ohio 45237

KEI P.O. 7070-39075
Requested by Henry J. Kaiser Company

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W.D. Pugh 7-9-80

TERMS AND CONDITIONS

THIS PURCHASE ORDER IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

In the event Seller's Quotation, acknowledgment, confirmation, invoice or other form states terms additional to or different from those set forth herein, this Purchase Order shall be deemed a notification of objection to such additional and/or different terms and a rejection thereof. This Purchase Order constitutes an offer to purchase, and not an acceptance of any offer to sell, the goods and any services described herein which may be accepted only in accordance with its terms and without modification, addition, deletion or alteration. In the absence of written acceptance or other written confirmation hereof by Seller, the commencement of any work by Seller in pursuance of this order or the making of any deliveries by Seller of the goods and services described herein shall be deemed an acceptance hereof and a contract shall be formed only upon the terms and conditions set forth herein.

1. As used herein, the term "Purchaser" means the party designated as such on the face of this purchase order; the term "Seller" means the party designated as such on the face of this order, and the term "Engineer" means Sargent and Lundy.
2. This purchase order, when properly signed by Purchaser and bearing an order number, is the only authorization which will be recognized by Purchaser for charges to its account.
3. Neither the quantity nor quality of the goods delivered by Seller to Purchaser shall differ from those specified on the face hereof, nor shall any other modifications of this purchase order be effective unless such changed quantity or other modification is first ordered by Purchaser by written change order. Seller shall make no shipment of non-conforming goods, whether as an accommodation or otherwise, unless first authorized in writing by Purchaser.
4. Seller shall properly package all goods for safe shipment to the Purchaser and a notice of shipment shall be sent by Seller to Purchaser at the time the goods described herein are shipped which shall state the number of the order, the kind of goods, the Seller's name and the carrier and route by which the shipment is being made.
5. Seller warrants that any transportation costs included in the price will not exceed actual transportation costs paid by Seller. If this order calls for payment of any transportation costs by Purchaser, Purchaser shall in no event be liable or accountable for any amount in excess of the actual costs of transportation. Seller shall be accountable for and pay any excess transportation costs arising from Seller's failure to make delivery to the F.O.B. point or to follow shipping instructions furnished by Purchaser.
6. In placing this Purchase Order, Purchaser is relying on Seller's skill and judgment in selecting and providing the proper goods and any applicable services for Purchaser's particular use. Seller warrants to Purchaser and its successors in interest that the goods and any services covered hereby will correspond with the description of the same on the face of this order, will conform to any applicable specifications, shall be new and of the best quality unless otherwise specified, and will be fit for the purpose for which they are furnished. Seller also warrants that said goods are free and clear of all liens and encumbrances whatsoever and that Seller has a good and marketable title to same, and Seller agrees to hold Purchaser free and harmless against any and all claims to said merchandise.
7. Seller represents that it has fully investigated all specifications, including any furnished by Purchaser, in connection with the goods, and based on such investigation and its past experience and superior knowledge with respect to such goods, has determined that the production thereof will not infringe any patent, trademark, trade secret or copyright. Seller warrants to Purchaser and its successors in interest that the sale or use of the goods and any services covered by this order, whether manufactured in accordance with Purchaser's specification or otherwise, do not and will not infringe upon any patent, trademark, trade secret or copyright and Seller shall defend, indemnify and hold Purchaser and its successors in interest free and harmless from and against any and all claims, demands, costs and liabilities, including legal expenses, arising out of any such infringement or claim of infringement. Purchaser is relying upon the experience, skill and superior knowledge of Seller with respect to the goods and makes no representation that Seller will be safe in manufacturing the goods as required under this order. In no event shall Purchaser or its successors in interest be liable to Seller for any patent, copyright, trade secret or trademark infringement or claim thereof. In the event Purchaser and/or its successors in interest is or are enjoined from the operation, use and/or sale of the goods or any services, or any part thereof, covered by this order, Seller shall (at its sole expense) take all reasonable steps possible to procure for Purchaser and its successors in interest the right to operate, use and sell said goods or any services, or any part thereof, covered by this order. If Seller cannot so procure the aforesaid right within a reasonable time, Seller shall then promptly (at Seller's sole expense):
 - (a) Modify said goods or services, or any part thereof, so as to avoid infringement of any patent or other proprietary interest, or
 - (b) Replace said goods or services, or any part thereof, with goods or services which do not infringe or violate any said patent or other proprietary interest, or
 - (c) Remove said goods or services, or any part thereof, and refund any compensation theretofore paid to Seller and pay to Purchaser any transportation costs and expenses that may have been paid or incurred by Purchaser in connection with the goods or any services, or any part thereof, so removed.

8. Seller shall assume and pay any and all loss or damage to the goods from any cause whatsoever until Purchaser takes delivery of the goods at the point of ultimate destination. Notwithstanding the foregoing or any terms of shipment, title to the goods shall pass from Seller to Purchaser when the goods are transferred at the point of origin to railway, truck, or other transportation facility.
9. Seller warrants and agrees that all goods delivered pursuant to this order shall be produced, sold and delivered to Purchaser in compliance with and conforming to all applicable laws and governmental orders, rules and regulations, and that the prices for such goods are not in excess of any applicable price established by law or governmental regulation. Seller shall furnish to Purchaser upon request certificates or other evidence showing compliance with this Article.
10. Purchaser shall have the right to perform such examination, inspection and tests of equipment material and workmanship as he may desire to assure himself that the goods meet all specified requirements of the Purchase Order. The Seller shall upon reasonable notice permit unrestricted access to the Purchaser or his duly authorized representative to his place of manufacture and to that of his sub-suppliers for the purpose of conducting such examination, inspection and tests at any and all times that the goods are in the process of manufacture, fabrication, assembly, testing or inspection. The Seller shall provide the Purchaser with sufficient, safe and proper facilities for the performance of said inspection.

Inspection documents in the quality control files of the Seller and his sub-suppliers which relate to work performed under the Purchase Order shall be accessible for examination by the Purchaser.

The Purchaser or his duly authorized representative shall have authority to reject materials or workmanship which are defective or not in accordance with the Purchase Order and to require their correction. Any material or work which is found defective or in nonconformance with the Purchase Order requirements, shall be satisfactorily corrected or replaced by the Seller without cost to the Purchaser.

Notwithstanding any prior payment therefor, all goods are subject to inspection and testing by Purchaser after arrival at the ultimate destination, and if the goods are to be incorporated into a plant or other operating facility, Purchaser's inspection and testing of the goods may be made under operating conditions after the goods have been installed. If upon inspection or testing such goods or any portion thereof are found to be nonconforming, unsatisfactory, defective, of inferior quality or workmanship or fail to meet any guarantee or operating or other specifications contained herein or any other requirements of this Purchase Order, then without prejudice to any other rights or remedies, Purchaser may return the goods or any part thereof to Seller, and all amounts theretofore paid by Purchaser to Seller on account of the purchase price of such returned goods, together with any costs incurred by Purchaser in connection with the original delivery or return of such goods, shall be repaid to Purchaser by Seller. Neither the inspection nor failure to make inspection nor acceptance of goods shall release Seller from any of the warranties or other provisions of this order nor impair Purchaser's right to reject nonconforming goods. Purchaser reserves the right, even after it has paid for and accepted said goods, to make a claim against Seller on account of any goods which do not prove to be satisfactory or are defective, irrespective of Purchaser's failure to notify Seller of a rejection of nonconforming goods or revocation of acceptance thereof, or to specify with particularity any defect in nonconforming goods after rejection or acceptance thereof.

11. Seller warrants that all goods will be of the best quality and satisfactory to Purchaser in every particular, and agrees promptly and at his own expense, either to repair any part of the goods which during the first year of actual use in service proves defective or otherwise unsuitable for the purposes contemplated by this Purchase Order, or to replace such part of the goods by shipping to Purchaser a new part under the same terms as apply hereunder to the shipment of the original part. Seller shall also reimburse Purchaser for any costs incurred by Purchaser in connection with the repair and/or replacement of defective or unsuitable goods including without limitation the cost of materials necessarily damaged by such remedying or replacing of such defective or unsuitable goods. A similar warranty shall apply to any replacement parts.
12. Time is of the essence hereof. If Seller shall default in performance hereof or breach any of its obligations hereunder or if Seller becomes insolvent or a trustee or a receiver of Seller's business or assets is appointed by any court or if Seller shall make an assignment for the benefit of creditors, then in any of such events Purchaser may cancel this order in whole or in part by written or telegraphic notice to Seller, and Purchaser shall have no liability or obligation whatsoever to Seller by reason of or resulting from such cancellation, but at Purchaser's sole election it may pay Seller its actual direct out-of-pocket costs of performance hereunder to the date of such cancellation, as approved by Purchaser, in which event the goods & uncompleted portions of the goods shall be the property of Purchaser and Seller shall safely hold the same for a reasonable time subject to receipt of Purchaser's written shipping instructions or other disposition instructions.
13. In addition to and without prejudice to the right to cancel under Article II, Purchaser may terminate this order in accordance with the following provisions:
- (a) If this order covers goods manufactured or fabricated to Purchaser's specifications, then at any time prior to delivery of all goods covered by this order Purchaser may terminate this order in whole or in part by written or telegraphic notice to Seller, and in such event the following provisions shall apply:
 - (i) Immediately upon receipt of such notice of termination or upon such other date as may be specified in said notice, Seller shall stop all work in connection with this order except as otherwise directed by Purchaser;
 - (ii) Purchaser shall pay and Seller shall accept as full compensation Seller's actual direct out-of-pocket costs to the date work is stopped, including Seller's reasonable expense in connection with termination of any subcontracts, all as approved by Purchaser, plus 6% of such costs, provided, however, that in no event shall the total amount to be paid to Seller upon such termination plus payments previously made exceed that proportion of the aggregate total purchase price specified herein that the work actually performed hereunder to the date work is stopped bears to the entire work to be performed hereunder;
 - (iii) The goods or uncompleted portions of the goods shall be the property of Purchaser, and Seller shall safely hold the same for a reasonable time, subject to receipt of Purchaser's written shipping or other disposition instructions.

- (b) If the goods covered by this order are standard stock merchandise, Purchaser may terminate all or any part of the undelivered portion of this order at any time by written or telephonic notice to Seller, and in such event Purchaser shall have no further obligation for reimbursement of the value hereunder except to make payment, subject to other obligations in this contract, for the goods actually shipped and in transit prior to such termination and to make payment for any goods as to which this order is not terminated which are shipped subsequent to such termination.
14. Seller shall indemnify and save Purchaser free and harmless from and against any and all claims, damages, liabilities or obligations of whatsoever kind, including but not limited to damage or destruction of property and injury or death of persons, resulting from or connected with Seller's performance hereunder or any default by Seller or breach of its obligations hereunder.
 15. This Purchase Order, together with any written documents which may be incorporated by specific reference, constitutes the entire agreement between the parties and supersedes all previous communications between them, either oral or written. All such previous communications are hereby abrogated and withdrawn, and no withdrawals, representations or agreements by Purchaser or any of its officers, agents or employees shall be binding on the Purchaser unless contained in this Purchase Order or incorporated herein by reference as above provided and no local, general or trade custom or previous course of dealing or performance shall alter or vary the terms hereof.
 16. The waiver by Purchaser of any term, condition or provision herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any provision in any subsequent order.
 17. Purchaser will not be responsible for delay in receipt of Seller's invoices and required supporting documents. Should delay occur, time allowed by the Seller for payment of invoices or for accepting a cash discount offered, shall commence on the date invoices, complete with any required supporting documents, are received by Purchaser.
 18. The laws of the State of Ohio shall govern the validity, interpretation and enforcement hereof.
 19. All plans, drawings, specifications and the subject matter contained therein and all other information given to Seller in connection with performance of this Purchase Order involve valuable proprietary rights of Purchaser and Seller and shall be held confidential by Seller, shall remain the property of Purchaser and Seller and shall not be used by Seller for any purposes other than those for which they have been supplied or prepared. Seller agrees that, as far as possible, it will keep confidential the making of this Order and the terms hereof. Seller agrees not to use for publicity purposes any photographs, drawings and/or materials in connection with the performance of this Order without obtaining the prior written consent of Purchaser and upon completion of this Order, Seller shall return all material given Seller as aforesaid.
 20. Seller shall take adequate measures to accomplish all elements of work required in connection with this Purchase Order within time limits which are compatible with the Schedule set forth in this Purchase Order, if any; and if no Schedule is included, within such time limits as are compatible with the shipping date specified therein. Such measures shall include, without limitation, expediting of its subcontractors for engineering and fabrication and expediting of its suppliers for materials and parts. Failure by Seller to perform all such activities so as to maintain scheduled completion of the order shall be considered a breach by Seller of its obligations under this Purchase Order. If required by Purchaser, Seller shall furnish a progress report each month which will show the scheduled start and completion dates and the percent completion for each of the following basic activities:
 - (a) Drawings and Technical Data (required for approval)
 - (b) Materials and Parts (required for manufacture)
 - (c) Production
 - (d) Scheduled to Ship
- Seller shall also provide Purchaser's expediting representatives such information as they may request concerning the Seller's program and schedule for the Purchase Order and shall accord the Purchaser's expediting representative full cooperation for their review and observation of Seller's engineering, materials procurement and production activities at Seller's facilities as well as at the facilities of Seller's suppliers and subcontractors. If Purchaser determines that Seller is not meeting the requirements of the Schedule, Seller shall take such action as may be required by Purchaser to enable Seller to comply with the requirements of the Schedule.
21. Purchaser may at any time or from time to time issue written instructions requiring additions, changes, deletions or alterations in the work to be performed under this Purchase Order. Seller will proceed with the work as instructed immediately if requested to do so by Purchaser in writing. Within ten days after receipt of said instructions, Seller shall furnish to Purchaser a statement in detail of its estimate of the net increase or decrease in cost resulting from its compliance with said instructions. Failure to furnish said statement within the prescribed time shall be deemed to be the equivalent of the statement that there is no increase in cost. Purchaser will consider the statement as submitted and upon the basis thereof and of other such matter as may be relevant will determine the amount of increase or decrease in the Purchase Order price and shall issue a change order hereto providing for any such increase or

decrease in the Purchase Order price. If Seller objects to Purchaser's determination, it will so notify Purchaser in writing within ten days after receipt of advice of Purchaser's change order. If the Seller and Purchaser do not agree with the increase or decrease, either party may pursue its legal remedies. Seller will continue to perform the work, including any such additions, changes, deletions or alterations, while any failure to agree with the increase or decrease in the Purchase Order price, unless otherwise directed by Purchaser.

22. In the event drawings submitted by Seller are incomplete or otherwise fail to meet the requirements of the Purchase Order, Purchaser shall notify Seller of such deficiencies. If Seller fails to promptly correct such deficiencies, Purchaser may make such corrections and any engineering time expended by Purchaser in making such corrections will be accumulated and the cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order.
23. In the event of delay to Seller resulting from the acts of omission or commission of Purchaser or resulting from the acts of God, strikes, fire or other causes beyond Seller's reasonable control, Seller shall be entitled to an extension of time by the amount of time he is actually delayed thereby in the performance of the work, provided notice is given as hereinafter provided. Seller shall not be entitled to, and hereby waives any and all claims to, increased compensation for, or damages which he may suffer from any such causes. Seller shall not be entitled to any such extension of time for delays from any such causes unless he notifies Purchaser, in writing, within five days of the commencement of such such cause or the occurrence thereof, of the probable duration thereof, together with essential supporting data and thereafter promptly gives written notice of the termination thereof and requests an extension of time. If approved by Purchaser, a written extension of time for completing the work shall be granted for the period reasonably justified.
24. Non-Discrimination: During the performance of the Purchase Order and to the extent that Executive Order No. 11246 may be applicable to this Purchase Order, the Seller agrees as follows:
 - (a) The Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - (b) The Seller will, in all solicitations or advertisements for employees placed by or on behalf of the Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
 - (c) The Seller will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Seller's commitments under Section 101 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (d) The Seller will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (e) The Seller will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Commission and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (f) In the event of the Seller's non-compliance with the non-discrimination clauses of this Purchase Order or with any of such rules, regulations, or orders, this Purchase Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
 - (g) The Seller will include the provisions of paragraph (a) through (g) hereof in every subcontract or purchase order unless excluded by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 101 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for non-compliance, provided that, in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Seller may request the United States to enter into such litigation to protect the interests of the United States.

Required Delivery ASAP-PLEASE

Hm
HENRY J. KAISER COMPANY

Type of Quotation: Verbal ☐ Written ☐

Engineering Review Required ☐

Approval prior to award required ☐

INQUIRY, REQUISITION, & RECOMMENDATION TO PURCHASE

ESSENTIAL

Hm
Page 1 of 2
Inq./Req. No. 208-36678
Date July 9, 1980
Material Welding Rod

To be used for Welding

Coded by	Bid No.	Bid No.	Bid No.
	<u>Wright</u> <u>(Hickay)</u> <u>10000</u>	<u>Wickon</u> <u>(Chencliam)</u> <u>10000</u>	<u>10000</u> <u>Dave Clark</u>

Attention W. O. Puckett

Item No.	Quantity	Unit	Description Give Complete Data-Drawing Number, Etc.	Account Number	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1.	2,000	lbs.	#E7018 - 1/8" Coated welding electrode in accordance with ASME Code SFA 5.1 with full nuclear certification and packaged in 10 ^{50#} 10# ^{hormotically} sealed cans. <u>SEE PAGE 2 7-10-80</u> <u>Material to be supplied by</u> <u>Hickay, an approved H.J. Kaiser Supplier.</u> <u>(10000 acceptable per W. Puckett)</u> <u>Wright Airco 712/16 stock</u>	781983431	.555	1110.00	.59	1180.00	.59	1180.00

Originator <u>W. O. Puckett 7-9-80</u>	Approved <u>[Signature]</u>	Total	1110.00	1180.00	1180.00
Item No.	Purchase Order or Sub Contract Recommendation To Be Placed With	P. O. No.	I. O. No.	Jobsite	Jobsite
			Terms	Net	Net
		7070-	Shipping	30 DAYS	45 DAYS
	<u>Wright Bros.</u>	39075	Shipping Point	9/29/80	
			Price Policy		

**TO BE PURCHASED
FROM APPROVED VENDOR
ONLY**

7-10-80

Quality Assurance Requirement

☒ Yes, see reverse side of

Requisition

QAW 113

☐ No Q. A. Requirement

7-10-80

Q. A. Manager

Reason Supplier

Selected

☒ Lowest Price

☐ Required Design

☐ Only Source Known

☐ Early Delivery

☐ Conformance to Q. A. Requirement

Remarks

Prepared By

Purchasing Agent KMC

APPROVED

Procurement Mgr. [Signature]

Administrative Mgr.

Project Mgr. [Signature]

Owner [Signature]

(See Note Below:)

Vendor Wright Brothers, Inc.
Address 1930 Losantiville Rd. Cincinnati, Ohio 45237

KEI P.O. 7070-39075
Requested by Henry J. Kaiser Company

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA 5.9
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	5.9 Stainless Steel Bare Wire	5. All Weld Metal Impact-stress relief ☐
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	6. Test X-Ray ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	7. Mill Test Report ☐
		3. Mill Test Report ☐	8. 10# Tube ☐
		4. 10# Tube ☐	9. Tagged both ends ☐
		5. Tagged Both ends ☐	

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. ND2h31.2b- 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. A. Puchner 7-9-60

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT
P.O. BOX 201
MOSCOW, OHIO 45153

PHONE:
CABLE: KAISENGS
TELEX:

HENRY J. KAISER
COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

CHANGE NO. 5
PURCHASE 7070-3907
ORDER NO.

SHEET 1 OF 1
THIS ORDER NUMBER MUST APPEAR
ALL INVOICES, PACKAGES, PACK
SLIPS, BILLS OF LADING, ETC.

PURCHASE ORDER CHANGE

DATE 10/23/80	TO BE SHIPPED N/C
------------------	----------------------

SELLER
Wright Brothers Inc.
1930 Losantiville Rd.
Cincinnati, Ohio 45237

Attention: Jerry McConnaughey
Phone: 731-8247

WORK ORDER NO. 57300

ITEM NO. 1

PLEASE MAKE THE FOLLOWING CHANGES IN THE ABOVE PURCHASE ORDER DATED 9/5/80

7811.9834.31

Change item 1 to read:

1950 Lb. #E7018 - 1/8" coated welding electrode in accordance
with ASME SFA 5.1

1 Lot Credit for 100 lb.

\$.555/lb. \$1082.

L.S. (55.

INSPECT TO INSTRUCTION

KEI QAE 113

QAE 10-29-80

NOTE: Credit is to be given for 150 lb. - one (1) 50 lb. container
to be rejected and returned and credit for an estimated 100
lbs. of rod to compensate for slight damage to various containers.

QA APPROVED

QA RECEIVING INSPECTION

☒ REQUIRED ☐ NOT REQUIRED

10-29-80
KEI QA ENGINEER

INSPECTED TO

KEI 10-29-80

DATE 10-29-80 STAMP

ESSENTIAL

All other terms and conditions of original order remain unchanged.

SALES OR USE TAX EXEMPTION

Previous Total:

Change "B" Decrease:

\$ 1110.00
(83.25)

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EX-
CISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION EXCEPT THE
GROSS SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT
PERMITS (98000288 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS
& SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY).

REVISED TOTAL
OF ORDER

\$ 1026.75

INVOICE PURCHASER

PURCHASER

HENRY J. KAISER COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

REQ. NO. 36678 SPEC. NO. NO.

AND MAIL FIVE (5) COPIES WITH
ORIGINAL BILL OF LADING TO:

PROJECT ENGINEER W. Puckett
KC:1C

HENRY J. KAISER COMPANY

AUTHORIZED SIGNATURE

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT
P.O. BOX 201
MOSCOW, OHIO 45153

PHONE:
CABLE: KAISENGS
TELEX:

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

CHANGE NO. "A"
PURCHASE
ORDER NO. 7070-39075

SHEET 1 OF 1
THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

PURCHASE ORDER CHANGE

DATE 10/7/80	TO BE SHIPPED 10/10/80
-----------------	---------------------------

SELLER

Wright Brothers Inc.
1930 Losantiville Rd.
Cincinnati, Ohio 45237

Attention: Jerry McConnaughey
Phone: 731-8247

WORK ORDER NO. 57300

ITEM NO. 1

PLEASE MAKE THE FOLLOWING CHANGES IN THE ABOVE PURCHASE ORDER DATED

9/5/80

7811.9834.31

This Change "A" is issued to change material supplier to read as follows:

Material to be supplied by Westinghouse, an approved H.
J. Kaiser Supplier.

QA APPROVED

QA RECEIVING INSPECTION

☒ REQUIRED ☐ NOT REQUIRED

Signature 10-13-80
KEI QA ENGINEER

Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation Part 21, Administration and Reporting of Defects and Non-compliances.

INSPECT TO INSTRUCTION

REI *Signature* 10-13-80
QAE *Signature* 10-13-80

All other terms and conditions of original order remain unchanged.

CONFIRMING DO NOT DUPLICATE

Part 1 - 40 included

With each shipment

All goods furnished under this order shall fully comply with all applicable health and safety laws, rules, and regulations including without limitation the Occupational Safety and Health Act of 1970 and the rules and regulations issued pursuant thereto.

SALES OR USE TAX EXEMPTION

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS (98000428 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000406 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY).

REVISED TOTAL
OF ORDER

No Change

INVOICE PURCHASER

REQ. 36678 SPEC. NO.
NO. NO.

AND MAIL FIVE (5) COPIES WITH
ORIGINAL BILL OF LADING TO:

PROJECT W. Puckett
ENGINEER KC:lc
10/8/80 *Signature*

HENRY J. KAISER COMPANY
P.O. Box 201

PURCHASER
HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

Signature
AUTHORIZED SIGNATORY

81260446

HENRY J. KAISER COMPANY

Moscow, Ohio

MATERIAL RECEIVED REPORT

THIS ORDER IS:

COMPLETE ☒
 NOT COMPLETE ☐
 REC. DAMAGED ☐

M.R. NO.: 64435

PAGE 1 OF 1

P. O. NO.: 7070-39075

REQ. NO.: 7070-36678

DAMAGE REPORT NO. 1.9921.9074 DATE RECEIVED: 10-15-80

ORDERED FROM: WRIGHT BROS. INC.

CINTI, OHIO

SHIPPED BY: WESTINGHOUSE ELECTRIC CORP.

ROBERTA, ALA.

SHIPPED TO: JOBSITE PACKING SLIP NO.: INV. # 50325

VIA: BUDIG F.O.B. POINT:

CARRIER		BUDIG
FREIGHT BILL		NO. 106438
EXPRESS BILL		WGT. 42.40 (CONT.)
PARCEL POST		DATE
PREPAID	☒	AMT. \$ 201.53
COLLECT	☐	AMT. \$
RAILLINE		
CAR NO.		
DOCK NO.		

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	LOCATION	ACCOUNT NO.
			WELDING ROD		
1	2000	LBS	ET018 1/8" X 14" COATED WELDING ELECTRODE	WHSE #2	7811.9834.31
			WESTINGHOUSE #22144 TYPE WIZ-18		
			SPECIFICATION SFA 5.1 PER ASME CODE SEC. III		
			LOT NO. 0102-A1-22144, HT. NO. 44814		
			PACKED IN 50# METAL CANS.		
			DAMAGE REPORT NO. 1.9921.9074:		
			APPEARED TO BE MORE FACTORY THAN TRANSIT		
			DAMAGE, INSPECTED BY BOTH CARRIER & VENDOR.		
			VENDOR HAS AGREED TO A TOTAL CREDIT OF		
			150 LBS. TO COMPENSATE FOR 1-50# CAN		
			REJECTED & RETURNED TO VENDOR ON MSR 5843		
			AND SMALL AMOUNTS OF ROD FROM MANY		
			CANS THAT ARE SLIGHTLY DAMAGED. ANY ROD		
			FROM THESE CANS THAT HAVE CRACKED FLUX		
			WHEN CANS ARE OPENED IN FIELD WILL BE		
			DISCARDED. THERE WILL BE NO REJECTION		
			OR MSR FOR THIS ROD.		
			ORDER WILL BE CONSIDERED COMPLETE.		

D.W.G. NO. _____

C.M. O. _____

REQ. ORIGINATOR W. PUCKETT

INSPECTED TO
 KEI 9AW113
 DATE 10-24-80 STAMP

QUALITY ASSURANCE INSPECTOR

CHECKED BY _____

ASST. WHSE. SUPT.

WAREHOUSE SUPT.

REASON FOR SHIPMENT:
RETURN FOR CREDIT: ✓
RETURN FOR REPAIR:
RETURN FOR REPLACEMENT:
RETURN FOR MARKING:
SHIPPED FOR FABRICAYON:
SHIPPED FOR TESTING:

KAISER ENGINEERS, INC.
MOSCOW, OHIO

EQUIPMENT OR MATERIAL
SHIPPING ORDER

SHIPPING ORDER NO. 5843
KAISER ENGINEERS
PURCHASE ORDER NO. 7070-39075
KAISER ENGINEERS
MATERIAL RECEIPT NO. 7070-36676

TO BE RETURNED: YES NO

Shipped to WRIGHT BROS. INC.

Authorized By: K. COLLINS

Address CINTI, OHIO

Date 10-23-80 Shipped From MOSCOW, ONIO By HJK CO.

B/L No. _____ Truck Line VENDOR

Express _____ Parcel Post _____ Water _____ Prepaid Collect _____

[illegible]

NO. OF PIECES: 1 CAN ESTIMATED WEIGHT: 50 #

Received the above described materials this _____ day of Oct 1980

REMARKS:

FOR: WRIC & T BROS. INC.

VENDOR WILL PICK UP WHEN
THEIR TRUCK MAKES A DELIVERY

By _____

WESTINGHOUSE ELECTRIC CORPORATION

ELECTRODE TEST REPORT

144814

P.O. 39075

Regn 36678

DATE 10/10/80

SOLD TO WRIGHT BROTHERS 1930 LOS ANTIVILLE ROAD CINCINNATI, OHIO 45237		SHIPPED TO HENRY B. KAISER COMPANY U.S. ROUTE 52 MOSCOW, OHIO 45153	
CUSTOMER ORDER NO. 1612	SHIPPED FROM Montevallo, Al.	INVOICE NO. JN-50325	
WESTINGHOUSE ORDER 1A-98777	DATE OF SHIPMENT 10/10/80	WIRE HEAT NO. 44814	

GENERAL ORDER ITEM NO.	STYLE NO.	QUANTITY	SIZE	TYPE	LOT NO.
------------------------------	--------------	----------	------	------	------------

Complies with Specification(s): TEST TO SFA 5.1 PER ASME CODE SEC. III

1. 22144 2000# 1/8" x 14" WIZ-18 0102 A1 22144

ASME QUALITY SYSTEM CERTIFICATES N-2010 AND N-2011 EXPIRE 3 DECEMBER 1980.

RESULTS OF MECHANICAL PROPERTIES AND RADIOGRAPHIC TESTS

LOT NO.	AS** WELDED	STRESS *** RELIEVED
YIELD PSI	70,000	62,200
TENSILE PSI	78,700	70,200
% ELONG. IN.	29	30
% RED. AREA	75	77

***Stress RELieved 8 Hours @ 1150°F.

X-Ray Satisfactory.

**As Welded Charpy Impacts @ -20°F.

Ft. Lbs. - 104, 98, 90
Lateral Expansion (Mils) - 74, 76, 69
% Shear - 50, 40, 40

***Stress Relieved Charpy Impacts @ -20°F.

Ft. Lbs. - 130, 126, 126
Lateral Expansion (Mils) - 85, 91, 92
% Shear - 50, 50, 50

10-15-80
KEI
QA
80

CHEMICAL ANALYSIS

C	.09
MN	.68
P	.02
S	.02
SI	.44
NI	.14
CR	.11
MO	.01
V	.01
Deposited Weld Metal	Core Wire Analysis

Cu .26

We certify that the contents of this report are correct and accurate, and that the test results and operations performed by Westinghouse or its subcontractors, as reported, are in compliance with the material specification and applicable material requirements of Section III of the ASME Boiler and Pressure Vessel Code as designated by the Customer.

Date 10/10/80

by

E. C. Pagan R.A. Mgr.
Westinghouse Electric Corporation

WM. H. ZIMMER NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. SFA-5.1 E7018
 Component Name Weld Filler Material
 Supplier WRIGHT BROTHERS Prepared By J. Deerwester

PO No. 7070-39075
 MR No. 36676
 Inspection Plan No. QAW 113
 Page 1 of 1
 Date 5-14-76 REV. 1

ITEM	INSPECTION	REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.		Visual		10-24-80	SEEMS OK 5843 (DAMAGED BY KEI 10-24-80)
2	Proper marking, per code specification, on individual containers including SFA specification. Record Heat Nos., Lot No. by size. <u>1/2" - LOT # 0102-A1-22144</u>		Visual		10-24-80	
3	Tagged (Both ends as required).		Visual	N/A	10-24-80	
4	Received from KEI approved supplier (applies to manufacturer and distributor).				10-24-80	
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).		Visual		10-24-80	
6	Dimensional, except sealed material. Do not open sealed cans.			N/A	10-24-80	

APPROVED:

M. J. Inedrich
 QA Manager

APPROVED FOR FILING:

J. Deerwester
 QAE

10-24-80
 DATE

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT

P. O. BOX 201
MOSCOW, OHIO 45153

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

PURCHASE

ORDER NO. 7070-29250

SHEET 1 OF 2

THIS ORDER NUMBER MUST APPEAR
ALL INVOICES, PACKAGES, PAPER
SLIPS, BILLS OF LADING, ETC.

Date: 10/7/80

SELLER

Westinghouse Electric Corporation
7710 Reading Rd.
Cincinnati, Ohio 45202

Attention: **Dick Martone**
Phone: **948-7321**

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:

- EXHIBIT "A" - SPECIFICATION NO.
- EXHIBIT "B" - TERMS AND CONDITIONS
- EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO. _____

SHIP DATE: 10/27/80

POINT OF ORIGIN:

TERMS OF PAYMENT: Net 30

F.O.B. POINT: Shipping Pt.

PRICE POLICY:

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
1.	2,000	Lbs.	Welding "Essential Nuclear Material" #E7018-1/8" coated welding electrode - in accordance with ASME Code SFA 5.1 (per attached sheet) with full nuclear certification and packaged in hermetically sealed cans	\$.437	\$ 874.00	7811.9834.31
All goods furnished under this order shall fully comply with all applicable health and safety laws, rules, and regulations, including without limitation, the Occupational Safety and Health Act, 29 U.S.C. 651, and the rules and regulations of the Nuclear Regulatory Commission. CONFIRMING DO NOT DUPLICATE Packaging may be included With Each Shipment SALES OR USE TAX EXEMPTION QA APPROVED QA RECEIVING INSPECTION ☒ REQUIRED ☐ NOT REQUIRED <i>[Signature]</i> 10-16-80 KEI QA ENGINEER Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation 10 C.F.R. Part 21, Notification and Reporting of Defects and Non-compliances. INSPECT TO INSTRUCTION KEI <i>GAW 113</i> QA <i>[Signature]</i> 10-16-80						
THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, STATE, AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS (98000298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY).				TOTAL OF ORDER	\$ 874.00	ESSENTIAL

REQ. 37359
NO.

SPEC.
NO.

PROJECT **W. Puckett**
ENGINEER **KE:lc**
10/10/80
[Signature]

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

[Signature]
AUTHORIZED SIGNATORY

(See Note Below:)

Vendor WESTINGHOUSE ELECTRIC SUPPLY COMPANY

KEI P.O. 7070-39382

Address 4545 Chickering Ave.

Requested by W. D. P. [Signature]

Cincinnati, Ohio 45232

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. ND2h31.2b - 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. D. P. [Signature]

TERMS AND CONDITIONS

THIS PURCHASE ORDER IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

In the event Seller's Quotation, acknowledgment, confirmation, invoice or other form states terms additional to or different from those set forth herein, this Purchase Order shall be deemed a notification of objection to such additional and/or different terms and a rejection thereof. This Purchase Order constitutes an offer to purchase, and not an acceptance of any offer to sell, the goods and any services described herein which may be accepted only in accordance with its terms and without modification, addition, deletion or alteration. In the absence of written acceptance or other written confirmation hereof by Seller, the commencement of any work by Seller in pursuance of this order or the making of any deliveries by Seller of the goods and services described herein shall be deemed an acceptance hereof and a contract shall be formed only upon the terms and conditions set forth herein.

3. As used herein, the term "Purchaser" means the party designated as such on the face of this purchase order; the term "Seller" means the party designated as such on the face of this order, and the term "Engineer" means Sargent and Lundy.
2. This purchase order, when properly signed by Purchaser and bearing an order number, is the only authorization which will be recognized by Purchaser for charges to its account.
3. Neither the quantity nor quality of the goods delivered by Seller to Purchaser shall differ from those specified on the face hereof, nor shall any other modifications of this purchase order be effective unless such changed quantity or other modification is first ordered by Purchaser by written change order. Seller shall make no shipment of non-conforming goods, whether as an accommodation or otherwise, unless first authorized in writing by Purchaser.
4. Seller shall properly package all goods for safe shipment to the Purchaser and a notice of shipment shall be sent by Seller to Purchaser at the time the goods described herein are shipped which shall state the number of the order, the kind of goods, the Seller's name and the carrier and route by which the shipment is being made.
5. Seller warrants that any transportation costs included in the price will not exceed actual transportation costs paid by Seller. If this order calls for payment of any transportation costs by Purchaser, Purchaser shall in no event be liable or accountable for any amount in excess of the actual costs of transportation. Seller shall be accountable for and pay any excess transportation costs arising from Seller's failure to make delivery to the F.O.B. Point or to follow shipping instructions furnished by Purchaser.
6. In placing this Purchase Order, Purchaser is relying on Seller's skill and judgment in selecting and providing the proper goods and any applicable services for Purchaser's particular use. Seller warrants to Purchaser and its successors in interest that the goods and any services covered hereby will correspond with the description of the same on the face of this order, will conform to any applicable specifications, shall be new and of the best quality unless otherwise specified, and will be fit for the purpose for which they are furnished. Seller also warrants said goods are free and clear of all liens and encumbrances whatsoever and that Seller has a good and marketable title to same, and Seller agrees to hold Purchaser free and harmless against any and all claims to said merchandise.
7. Seller represents that it has fully investigated all specifications, including any furnished by Purchaser, in connection with the goods, and based on such investigation and its past experience and superior knowledge with respect to such goods, has determined that the production thereof will not infringe any patent, trademark, trade secret or copyright. Seller warrants to Purchaser and its successors in interest that the sale or use of the goods and any services covered by this order, whether manufactured in accordance with Purchaser's specification or otherwise, do not and will not infringe upon any patent, trademark, trade secret or copyright and Seller shall defend, indemnify and hold Purchaser and its successors in interest free and harmless from and against any and all claims, demands, costs and liabilities, including legal expenses, arising out of any such infringement or claim of infringement. Purchaser is relying upon the experience, skill and superior knowledge of Seller with respect to the goods and makes no representation that Seller will be safe in manufacturing the goods as required under this order. In no event shall Purchaser or its successors in interest be liable to Seller for any patent, copyright, trade secret or trademark infringement or claim thereof. In the event Purchaser and/or its successors in interest is or are enjoined from the operation, use and/or sale of the goods or any services, or any part thereof, covered by this order, Seller shall (at its sole expense) take all reasonable steps possible to procure for Purchaser and its successors in interest the right to operate, use and sell said goods or any services, or any part thereof, covered by this order. If Seller cannot so procure the aforesaid right within a reasonable time, Seller shall then promptly (at Seller's sole expense):
 - (a) Modify said goods or services, or any part thereof, so as to avoid infringement of any patent or other proprietary interest, or
 - (b) Replace said goods or services, or any part thereof, with goods or services which do not infringe or violate any said patent or other proprietary interest, or
 - (c) Remove said goods or services, or any part thereof, and refund any compensation theretofore paid to Seller and pay to Purchaser any transportation costs and expenses that may have been paid or incurred by Purchaser in connection with the goods or any services, or any part thereof, so removed.

9. Seller shall assume and pay any and all loss or damage to the goods from any cause whatsoever until Purchaser takes delivery of the goods at the point of ultimate destination. Notwithstanding the foregoing or any terms of shipment, title to the goods shall pass from Seller to Purchaser when the goods are transferred at the point of origin to railcar, truck, or other transportation facility.

9. Seller warrants and agrees that all goods delivered pursuant to this order shall be produced, sold and delivered to Purchaser in compliance with and conforming to all applicable laws and governmental orders, rules and regulations, and that the prices for such goods are not in excess of any applicable price established by law or governmental regulation. Seller shall furnish to Purchaser upon request certificates or other evidence showing compliance with this Article.

10. Purchaser shall have the right to perform such examination, inspection and tests of equipment material and workmanship as he may desire to assure himself that the goods meet all specified requirements of the Purchase Order. The Seller shall upon reasonable notice permit unrestricted access to the Purchaser or his duly authorized representative(s) to his place of manufacture and to that of his sub-suppliers for the purpose of conducting such examination, inspection and tests at any and all times that the goods are in the process of manufacture, fabrication, assembly, testing or inspection. The Seller shall provide the Purchaser with sufficient, safe and proper facilities for the performance of said inspection.

Inspection documents in the quality control files of the Seller and his sub-suppliers which relate to work performed under the Purchase Order shall be accessible for examination by the Purchaser.

The Purchaser or his duly authorized representative shall have authority to reject materials or workmanship which are defective or not in accordance with the Purchase Order and to require their correction. Any material or work which is found defective or in nonconformance with the Purchase Order requirements, shall be satisfactorily corrected or replaced by the Seller without cost to the Purchaser.

Notwithstanding any prior payment therefor, all goods are subject to inspection and testing by Purchaser after arrival at the ultimate destination. If the goods are to be incorporated into a plant or other operating facility, Purchaser's inspection and testing of the goods may be made under operating conditions after the goods have been installed. If upon inspection or testing such goods or any portion thereof are found to be nonconforming, unsatisfactory, defective, of inferior quality or workmanship or fail to meet any guarantees or operating or other specifications contained herein or any other requirements of this Purchase Order, then without prejudice to any other rights or remedies, Purchaser may return the goods or any part thereof to Seller, and all amounts heretofore paid by Purchaser to Seller on account of the purchase price of such returned goods, together with any costs incurred by Purchaser in connection with the original delivery or return of such goods, shall be repaid to Purchaser by Seller. Neither the inspection nor failure to make inspection nor acceptance of goods shall release Seller from any of the warranties or other provisions of this order nor impair Purchaser's right to reject nonconforming goods. Purchaser reserves the right, even after it has paid for and accepted said goods, to make a claim against Seller on account of any goods which do not prove to be satisfactory or are defective, irrespective of Purchaser's failure to notify Seller or a rejection of nonconforming goods or revocation of acceptance thereof, or to specify with particularity any defect in nonconforming goods after rejection or acceptance thereof.

11. Seller warrants that all goods will be of the best quality and satisfactory to Purchaser in every particular, and agrees promptly and at his own expense, either to repair any part of the goods which during the first year of actual use in service proves defective or otherwise unsuitable for the purposes contemplated by this Purchase Order, or to replace such part of the goods by shipping to Purchaser a new part under the same terms as apply hereunder to the shipment of the original part. Seller shall also reimburse Purchaser for any costs incurred by Purchaser in connection with the repair and/or replacement of defective or unsuitable goods including without limitation the cost of materials necessarily damaged by such remedying or replacing of such defective or unsuitable goods. A similar warranty shall apply to any replacement parts.

12. Time is of the essence hereof. If Seller shall default in performance hereof or breach any of its obligations hereunder or if Seller becomes insolvent or a trustee or a receiver of Seller's business or assets is appointed by any court or if Seller shall make an assignment for the benefit of creditors, then in any of such events Purchaser may cancel this order in whole or in part by written or telegraphic notice to Seller, and Purchaser shall have no liability or obligation whatsoever to Seller by reason of or resulting from such cancellation, but at Purchaser's sole election it may pay Seller its actual direct out-of-pocket costs of performance hereunder to the date of such cancellation, as approved by Purchaser, in which event the goods or uncompleted portions of the goods shall be the property of Purchaser and Seller shall safely hold the same for a reasonable time subject to receipt of Purchaser's written shipping instructions or other disposition instructions.

13. In addition to and without prejudice to the right to cancel under Article II, Purchaser may terminate this order in accordance with the following provisions:

(a) If this order covers goods manufactured or fabricated to Purchaser's specifications, then at any time prior to delivery of all goods covered by this order Purchaser may terminate this order in whole or in part by written or telegraphic notice to Seller, and in such event the following provisions shall apply:

(i) Immediately upon receipt of such notice of termination or upon such other date as may be specified in said notice, Seller shall stop all work in connection with this order except as otherwise directed by Purchaser;

(ii) Purchaser shall pay and Seller shall accept as full compensation Seller's actual direct out-of-pocket costs to the date work is stopped, including Seller's reasonable expense in connection with termination of any sub-contracts, all as approved by Purchaser, plus 6% of such costs, provided, however, that in no event shall the total amount to be paid to Seller upon such termination plus payments previously made exceed that proportion of the aggregate total purchase price specified herein that the work actually performed hereunder to the date work is stopped bears to the entire work to be performed hereunder;

(iii) The goods or uncompleted portions of the goods shall be the property of Purchaser, and Seller shall safely hold the same for a reasonable time, subject to receipt of Purchaser's written shipping or other disposition instructions.

- (b) If the goods covered by this order are standard stock merchandise, Purchaser may terminate all or any part of the unshipped portion of this order at any time by written or telegraphic notice to Seller, and in such event Purchaser shall have no further obligation for cancellation charges or otherwise hereunder except to make payment, subject to other applicable terms hereof, for the goods actually shipped and in transit prior to such termination and to make payment for any goods as to which this order is not terminated which are shipped subsequent to such termination.
14. Seller shall indemnify and save Purchaser free and harmless from and against any and all claims, damages, liabilities or obligations of whatever kind, including but not limited to damage or destruction of property and injury or death of persons, resulting from or connected with Seller's performance hereunder or any default by Seller or breach of its obligations hereunder.
 15. This Purchase Order, together with any written documents which may be incorporated by specific reference, constitutes the entire agreement between the parties and supersedes all previous communications between them, either oral or written. All such previous communications are hereby abrogated and withdrawn, and no stipulations, representations or agreements by Purchaser or any of its officers, agents or employees shall be binding on the Purchaser unless contained in this Purchase Order or incorporated herein by reference as above provided and no local, general or trade custom or previous course of dealing or performance shall alter or vary the terms hereof.
 16. The waiver by Purchaser of any term, condition or provision herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any provision in any subsequent order.
 17. Purchaser will not be responsible for delay in receipt of Seller's invoices and required supporting documents. Should delay occur, time allowed by the Seller for payment of invoices or for accepting a cash discount offered, shall commence on the date invoices, complete with any required supporting documents, are received by Purchaser.
 18. The laws of the State of Ohio shall govern the validity, interpretation and enforcement hereof.
 19. All plans, drawings, specifications and the subject matter contained therein and all other information given to Seller in connection with performance of this Purchase Order involve valuable proprietary rights of Purchaser and Seller and shall be held confidential by Seller, shall remain the property of Purchaser and Seller and shall not be used by Seller for any purposes other than those for which they have been supplied or prepared. Seller agrees that, as far as possible, it will keep confidential the making of this Order and the terms hereof. Seller agrees not to use for publicity purposes any photographs, drawings and/or materials in connection with the performance of this Order without obtaining the prior written consent of Purchaser and upon completion of this Order, Seller shall return all material given Seller as aforesaid.
 20. Seller shall take adequate measures to accomplish all elements of work required in connection with this Purchase Order within time limits which are compatible with the Schedule set forth in this Purchase Order, if any, and if no Schedule is included, within such time limits as are compatible with the shipping date specified therein. Such measures shall include, without limitation, expediting of its subcontractors for engineering and fabrication and expediting of its suppliers for materials and parts. Failure by Seller to perform all such activities so as to maintain scheduled completion of the order shall be considered a breach by Seller of its obligations under this Purchase Order. If required by Purchaser, Seller shall furnish a progress report each month which will show the scheduled start and completion dates and the percent completion for each of the following basic activities:
 - (a) Drawings and Technical Data (required for approval)
 - (b) Materials and Parts (required for manufacture)
 - (c) Production
 - (d) Scheduled to Ship

Seller shall also provide Purchaser's expediting representatives such information as they may request concerning the Seller's progress and schedule for the Purchase Order and shall accord the Purchaser's expediting representative full cooperation for their review and observation of Seller's engineering, materials acquisition and production activities at Seller's facilities as well as at the facilities of Seller's suppliers and subcontractors. If Purchaser determines that Seller is not meeting the requirements of the Schedule, Seller shall take such action as may be required by Purchaser to enable Seller to comply with the requirements of the Schedule.

21. Purchaser may at any time or from time to time issue written instructions requiring additions, changes, deletions or alterations in the work to be performed under this Purchase Order. Seller will proceed with the work as instructed immediately if requested to do so by Purchaser in writing. Within ten days after receipt of said instructions, Seller shall furnish to Purchaser a statement in detail of its estimate of the net increase or decrease in cost resulting from its compliance with said instructions. Failure to furnish said statement within the prescribed time shall be deemed to be the equivalent of the statement that there is no increase in cost. Purchaser will consider the statement as submitted and upon the basis thereof and of other such matter as may be relevant will determine the amount of increase or decrease in the Purchase Order price and shall issue a change order hereto providing for any such increase or

decrease in the Purchase Order price. If Seller objects to Purchaser's determination, it will so notify Purchaser in writing within ten days after receipt of acceptance of Purchaser's change order. If the Seller and Purchaser do not agree upon the increase or decrease, either party may pursue its legal remedies. Seller will continue to perform the work, including any such additions, changes, deletions or alterations despite any failure to agree upon the increase or decrease in the Purchase Order price, unless otherwise directed by Purchaser.

22. In the event drawings submitted by Seller are incomplete or otherwise fail to meet the requirements of the Purchase Order, Purchaser shall notify Seller of such deficiencies. If Seller fails to promptly correct such deficiencies, Purchaser may make such corrections and any engineering time expended by Purchaser in making such corrections will be accumulated and the cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order.
23. In the event of delay to Seller resulting from the acts of omission or commission of Purchaser or resulting from the acts of God, strikes, fire or other causes beyond Seller's reasonable control, Seller shall be entitled to an extension of time by the amount of time he is actually delayed thereby in the performance of the work, provided notice is given as hereinafter provided. Seller shall not be entitled to, and hereby waives any and all claims to, increased compensation for, or damages which he may suffer from any such causes. Seller shall not be entitled to any such extension of time for delays from any such causes unless he notifies Purchaser, in writing, within five days of the commencement of each such cause or the occurrence thereof, of the probable duration thereof, together with essential supporting data and thereafter promptly gives written notice of the termination thereof and requests an extension of time. If approved by Purchaser, a written extension of time for completing the work shall be granted for the period reasonably justified.
24. Non-Discrimination: During the performance of the Purchase Order and to the extent that Executive Order No. 11246 may be applicable to this Purchase Order, the Seller agrees as follows:
 - (a) The Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - (b) The Seller will, in all solicitations or advertisements for employees placed by or on behalf of the Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
 - (c) The Seller will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Seller's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (d) The Seller will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (e) The Seller will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Commission and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (f) In the event of the Seller's non-compliance with the non-discrimination clauses of this Purchase Order or with any of such rules, regulations, or orders, this Purchase Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
 - (g) The Seller will include the provisions of paragraph (a) through (g) hereof in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance, provided that, in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Seller may request the United States to enter into such litigation to protect the interests of the United States.

Material Welding Rod

To be used for			Welding			Coded by		Bid No.		Bid No.		Bid No.	
								Westinghouse		Chrometren		Wright Bros	
Attention Janet Tumbleson										Dettie		M. L. (McKay)	
Item No.	Quantity	Unit	Description Give Complete Data-Drawing Number, Etc.	Account Number	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount			
1	2,000	lbs.	#E7018 - 1/8" Coated Welding electrode in accordance with ASME Code SFA 5.1 with full nuclear certification and packaged in 10 ⁵⁰ hermetically sealed cans.	2811983431	1.437	874.00	1.459	918.00	1.50	1000.00			
			(Chrometren) (Chrometren) Ohrowldg Welding	Murex									
			1,494/11b, 9900.00, 50lb	1012.00	1,606/11b	\$12	12.00						
			Stock	Job site	3-1 ARO								
				2 WKS ARO									
Originator			W.D. Purdum 9-22-80			Approved			Total 874.00 988.00 1000.00				
Item No.	Purchase Order or Sub Contract Recommend To Be Placed With		P. O. No.	F. O. B.	Terms	Shipping	Shipping Point	Price Policy	Reason Supplier Selected		Prepared By		
	Westinghouse		7070-39382		Net 30 days	2 WKS ARO	10/27/80		J.P.		Jh		
TO BE PURCHASED FROM APPROVED VENDOR ONLY			9-24-80			Quality Assurance Requirement			Reason Supplier Selected		Prepared By		
						☒ Yes, see reverse side of Requisition GAW 113 ☐ No Q. A. Requirement 9-24-80			☒ Lowest Price ☐ Required Design ☐ Only Source Known ☐ Early Delivery ☐ Conformance to Q. A. Requirement Remarks		Purchasing Agent APPROVED: Procurement Mgr. Administrative Mgr.		

(See Note Below:)

Vendor WESTINGHOUSE ELECTRIC SUPPLY COMPANY

Address 4545 Chickerling Ave.

Cincinnati, Ohio 45232

KEI P.O. 7070-39382

Requested by W. M. P. C. B. M.

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. A. Fuchs, Jr.

WESTINGHOUSE ELECTRIC CORPORATION

ELECTRODE TEST REPORT

144814
DATE 10/10/80

SOLD TO HENRY J. KAISER COMPANY P O BOX 201 U.S. ROUTE 201 MOSCOW, OHIO 45153		SHIPPED TO SAME			
CUSTOMER ORDER NO. 39382	SHIPPED FROM Montevallo, Al.	INVOICE NO. JN-50326			
WESTINGHOUSE ORDER 1A-98808	DATE OF SHIPMENT 10/10/80	WIRE HEAT NO. 44814			
GENERAL ORDER ITEM NO.	STYLE NO.	QUANTITY	SIZE	TYPE	LOT NO.

Complies with Specification(s): TEST TO SFA 5.1 PER ASME CODE SEC. III

1.	22144	2000#	1/8" x 14"	WIZ-18	0102 A1 22144
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ASME QUALITY SYSTEM CERTIFICATES N-2010 AND N-2011 EXPIRE 3 DECEMBER 1980.

RESULTS OF MECHANICAL PROPERTIES AND RADIOGRAPHIC TESTS

LOT NO.	AS** WELDED	STRESS *** RELIEVED
YIELD PSI	70,000	62,200
TENSILE PSI	78,700	70,200
% ELONG. IN.	29	30
% RED. AREA	75	77

***Stress RELIEVED 8 Hours @ 1150°F.
X-Ray Satisfactory.

**As Welded-Charpy Impacts @ -20°F.

Ft. Lbs.	-	104,	98,	90
Lateral Expansion (Mils)	-	74,	76,	69
% Shear	-	50,	40,	40

***Stress Relieved Charpy Impacts @ -20°F.

Ft. Lbs.	-	130,	126,	126
Lateral Expansion (Mils)	-	85,	91,	92
% Shear	-	50,	50,	50

10-15-80
KEI
QA
80

CHEMICAL ANALYSIS		
C	.09	
MN	.63	
P	.02	
S	.02	
SI	.44	
NI	.14	
CR	.11	
MO	.01	
V	.01	
Deposited Weld Metal		Core Wire Analysis
Cu	.26	

We certify that the contents of this report are correct and accurate, and that the test results and operations performed by Westinghouse or its subcontractors, as reported, are in compliance with the material specification and applicable material requirements of Section III of the ASME Boiler and Pressure Vessel Code as designated by the Customer.

Date 10/10/80

by E. C. Pagan Q. A. Ingr.
Westinghouse Electric Corporation

WM. H. ZIMMER NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. E-7018 SFA 5.1Component Name Weld Filler MaterialSupplier WESTINGHOUSE ELECTRIC CO. Prepared By J. DeerwesterPO No. 7070-39382MR No. 64434Inspection Plan No. QAW 113Page 1 of 1Date 5-14-76 REV. 1

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.	Visual		10-16-80	
2	Proper marking, per code specification, on individual containers including SFA specification, Record Heat Nos., Lot No. by size. <u>1/8" - LOT # 0102-A1-22144</u>	Visual		10-16-80	
3	Tagged (Both ends as required).	Visual	N/A	10-16-80	
4	Received from KEI approved supplier (applies to manufacturer and distributor).			10-16-80	
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).	Visual		10-16-80	
6	Dimensional, except sealed material. Do not open sealed cans.		N/A	10-16-80	

APPROVED:

N. J. Friedrich
QA Manager

APPROVED FOR FILING:

J. Deerwester 10-16-80
QAE DATE

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENT

P. O. BOX 201
MOSCOW, OHIO 45153

HENRY J. KAISER COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

A-72

PURCHASE ORDER NO. 7070-39556

SHEET 1 OF 2 SHEETS

THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

Date: 10/23/80

SELLER

Westinghouse Electric Corporation
7710 Reading Rd.
Cincinnati, Ohio 45202

Attention:

Phone: 948-7321

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:

EXHIBIT "A" - SPECIFICATION NO.
EXHIBIT "B" - TERMS AND CONDITIONS
EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: 11/14/80

POINT OF ORIGIN:

TERMS OF PAYMENT: Net 30 days

F.O.B. POINT: Shipping Pt.

PRICE POLICY:

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
1.	2000	Lbs.	<u>Welding "Essential Nuclear Material"</u> E7018-3/32" coated welding electrode in accordance with ASME Code SFA 5.1 per attached data sheet with full nuclear certification and packaged in hermetically sealed cans.	\$.632	\$ 1264.00	7811.9834/31
QA APPROVED QA RECEIVING INSPECTION ☒ REQUIRED ☐ NOT REQUIRED <i>10-29-80</i> KEI QA ENGINEER			ESSENTIAL INSPECT TO INSTRUCTION KEI <i>QAW 113</i> QAE <i>10-30-80</i>	CONFIRMING DO NOT DUPLICATE Packaging to be included With four Shomeni All goods furnished under this order shall fully comply with all applicable health and safety laws, rules, and regulations including without limitation the Occupational Safety and Health Act of 1970 and the rules and regulations issued pursuant thereto.		
Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation 10 CFR Part 21, Notification and Reporting of Defects and Non-compliances.						
SALES OR USE TAX EXEMPTION						
THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS 98000298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.				TOTAL OF ORDER \$ 1264.00		

REQ. NO. 37358

SPEC. NO.

PROJECT ENGINEER W. Puckett
KC:lc
10/28/80
JMC

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

D. O'Kup
AUTHORIZED SIGNATORY

Purchasing Agent

(See Note Below:)

Vendor WESTINGHOUSE ELECTRIC CORP.
Address 7710 READING RD.
CINCINNATI, OHIO 45202

KEI P.O. 7070-39556
Requested by _____

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3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. A. Puckett 9-22-80

TERMS AND CONDITIONS

THIS PURCHASE ORDER IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

In the event Seller's Quotation, acknowledgment, confirmation, invoice or other form states terms additional to or different from those set forth herein, this Purchase Order shall be deemed a notification of objection to such additional and/or different terms and a rejection thereof. This Purchase Order constitutes an offer to purchase, and not an acceptance of any offer to sell, the goods and any services described herein which may be accepted only in accordance with its terms and without modification, addition, deletion or alteration. In the absence of written acceptance or other written confirmation hereof by Seller, the commencement of any work by Seller in pursuance of this order or the making of any deliveries by Seller of the goods and services described herein shall be deemed an acceptance hereof and a contract shall be formed only upon the terms and conditions set forth herein.

1. As used herein, the term "Purchaser" means the party designated as such on the face of this purchase order; the term "Seller" means the party designated as such on the face of this order, and the term "Engineer" means Sergeant and Lundy.
2. This purchase order, when properly signed by Purchaser and bearing an order number, is the only authorization which will be recognized by Purchaser for charges to its account.
3. Neither the quantity nor quality of the goods delivered by Seller to Purchaser shall differ from those specified on the face hereof, nor shall any other modifications of this purchase order be effective unless such changed quantity or other modification is first ordered by Purchaser by written change order. Seller shall make no shipment of non-conforming goods, whether as an accommodation or otherwise, unless first authorized in writing by Purchaser.
4. Seller shall properly package all goods for safe shipment to the Purchaser and a notice of shipment shall be sent by Seller to Purchaser at the time the goods described herein are shipped which shall state the number of the order, the kind of goods, the Seller's name and the carrier and route by which the shipment is being made.
5. Seller warrants that any transportation costs included in the price will not exceed actual transportation costs paid by Seller. If this order calls for payment of any transportation costs by Purchaser, Purchaser shall in no event be liable or accountable for any amount in excess of the actual costs of transportation. Seller shall be accountable for and pay any excess transportation costs arising from Seller's failure to make delivery to the F.O.B. Point or to follow shipping instructions furnished by Purchaser.
6. In placing this Purchase Order, Purchaser is relying on Seller's skill and judgment in selecting and providing the proper goods and any applicable services for Purchaser's particular use. Seller warrants to Purchaser and its successors in interest that the goods and any services covered hereby will correspond with the description of the same on the face of this order, will conform to any applicable specifications, shall be new and of the best quality unless otherwise specified, and will be fit for the purpose for which they are furnished. Seller also warrants said goods are free and clear of all liens and encumbrances whatsoever and that Seller has a good and marketable title to same, and Seller agrees to hold Purchaser free and harmless against any and all claims to said merchandise.
7. Seller represents that it has fully investigated all specifications, including any furnished by Purchaser, in connection with the goods, and based on such investigation and its past experience and superior knowledge with respect to such goods, has determined that the production thereof will not infringe any patent, trademark, trade secret or copyright. Seller warrants to Purchaser and its successors in interest that the sale or use of the goods and any services covered by this order, whether manufactured in accordance with Purchaser's specification or otherwise, do not and will not infringe upon any patent, trademark, trade secret or copyright and Seller shall defend, indemnify and hold Purchaser and its successors in interest free and harmless from and against any and all claims, demands, costs and liabilities, including legal expenses, arising out of any such infringement or claim of infringement. Purchaser is relying upon the experience, skill and superior knowledge of Seller with respect to the goods and makes no representation that Seller will be safe in manufacturing the goods as required under this order. In no event shall Purchaser or its successors in interest be liable to Seller for any patent, copyright, trade secret or trademark infringement or claim thereof. In the event Purchaser and/or its successors in interest is or are enjoined from the operation, use and/or sale of the goods or any services, or any part thereof, covered by this order, Seller shall (at its sole expense) take all reasonable steps possible to procure for Purchaser and its successors in interest the right to operate, use and sell said goods or any services, or any part thereof, covered by this order. If Seller cannot so procure the aforesaid right within a reasonable time, Seller shall then promptly (at Seller's sole expense):
 - (a) Modify said goods or services, or any part thereof, so as to avoid infringement of any patent or other proprietary interest, or
 - (b) Replace said goods or services, or any part thereof, with goods or services which do not infringe or violate any said patent or other proprietary interest, or
 - (c) Remove said goods or services, or any part thereof, and refund any compensation theretofore paid to Seller and pay to Purchaser any transportation costs and expenses that may have been paid or incurred by Purchaser in connection with the goods or any services, or any part thereof, so removed.

9. Seller shall assume and pay any and all loss or damage to the goods from any cause whatsoever until Purchaser takes delivery of the goods at the point of ultimate destination. Notwithstanding the foregoing or any terms of shipment, title to the goods shall pass from Seller to Purchaser when the goods are transferred at the point of origin to railcar, truck, or other transportation facility.
9. Seller warrants and agrees that all goods delivered pursuant to this order shall be produced, sold and delivered to Purchaser in compliance with and conforming to all applicable laws and governmental orders, rules and regulations, and that the prices for such goods are not in excess of any applicable price established by law or governmental regulation. Seller shall furnish to Purchaser upon request certificates or other evidence showing compliance with this Article.
10. Purchaser shall have the right to perform such examination, inspection and tests of equipment material and workmanship as he may desire to assure himself that the goods meet all specified requirements of the Purchase Order. The Seller shall upon reasonable notice permit unrestricted access to the Purchaser or his duly authorized representatives to his place of manufacture and to that of his sub-suppliers for the purpose of conducting such examination, inspection and tests at any and all times that the goods are in the process of manufacture, fabrication, assembly, testing or inspection. The Seller shall provide the Purchaser with sufficient, safe and proper facilities for the performance of said inspection.
- Inspection documents in the quality control files of the Seller and his sub-suppliers which relate to work performed under the Purchase Order shall be accessible for examination by the Purchaser.
- The Purchaser or his duly authorized representative shall have authority to reject materials or workmanship which are defective or not in accordance with the Purchase Order and to require their correction. Any material or work which is found defective or in nonconformance with the Purchase Order requirements, shall be satisfactorily corrected or replaced by the Seller without cost to the Purchaser.
- Notwithstanding any prior payment therefor, all goods are subject to inspection and testing by Purchaser after arrival at the ultimate destination. The goods are to be incorporated into a plant or other operating facility. Purchaser's inspection and testing of the goods may be made under operating conditions after the goods have been installed. If upon inspection or testing of the goods or any portion thereof are found to be nonconforming, unsatisfactory, defective, of inferior quality or workmanship or fail to meet any guarantees or operating or other specifications contained herein or any other requirements of this Purchase Order, then without prejudice to any other rights or remedies, Purchaser may return the goods or any part thereof to Seller, and all amounts hereinafter paid by Purchaser to Seller on account of the purchase price of such returned goods, together with any costs incurred by Purchaser in connection with the original delivery or return of such goods, shall be repaid to Purchaser by Seller. Neither the inspection nor failure to make inspection nor acceptance of goods shall release Seller from any of the warranties or other provisions of this order nor impair Purchaser's right to reject nonconforming goods. Purchaser reserves the right, even after it has paid for and accepted said goods, to make a claim against Seller on account of any goods which do not prove to be satisfactory or are defective, irrespective of Purchaser's failure to notify Seller or a rejection of nonconforming goods or reduction of acceptance thereof, or to specify with particularity any defect in nonconforming goods after rejection or acceptance thereof.
11. Seller warrants that all goods will be of the best quality and satisfactory to Purchaser in every particular, and agrees promptly and at his own expense, either to repair any part of the goods which during the first year of actual use in service proves defective or otherwise unsuitable for the purposes contemplated by this Purchase Order, or to replace such part of the goods by shipping to Purchaser a new part under the same terms as apply hereunder to the shipment of the original part. Seller shall also reimburse Purchaser for any costs incurred by Purchaser in connection with the repair and/or replacement of defective or unsuitable goods including without limitation the cost of materials necessarily damaged by such remedying or replacing of such defective or unsuitable goods. A similar warranty shall apply to any replacement parts.
12. Time is of the essence hereof. If Seller shall default in performance hereof or breach any of its obligations hereunder or if Seller becomes insolvent or a trustee or a receiver of Seller's business or assets is appointed by any court or if Seller shall make an assignment for the benefit of creditors, then in any of such events Purchaser may cancel this order in whole or in part by written or telegraphic notice to Seller, and Purchaser shall have no liability or obligation whatsoever to Seller by reason of or resulting from such cancellation, but at Purchaser's sole election it may pay Seller its actual direct out-of-pocket costs of performance hereunder to the date of such cancellation, as approved by Purchaser, in which event the goods or uncompleted portions of the goods shall be the property of Purchaser and Seller shall safely hold the same for a reasonable time subject to receipt of Purchaser's written shipping or other disposition instructions.
13. In addition to and without prejudice to the right to cancel under Article II, Purchaser may terminate this order in accordance with the following provisions:
- (a) If this order covers goods manufactured or fabricated to Purchaser's specifications, then at any time prior to delivery of all goods covered by this order Purchaser may terminate this order in whole or in part by written or telegraphic notice to Seller, and in such event the following provisions shall apply:
 - (i) Immediately upon receipt of such notice of termination or upon such other date as may be specified in said notice, Seller shall stop all work in connection with this order except as otherwise directed by Purchaser;
 - (ii) Purchaser shall pay and Seller shall accept as full compensation Seller's actual direct out-of-pocket costs to the date work is stopped, including Seller's reasonable expense in connection with termination of any subcontracts, all as approved by Purchaser, plus 5% of such costs, provided, however, that in no event shall the total amount to be paid to Seller upon such termination plus payments previously made exceed that proportion of the aggregate total purchase price specified herein that the work actually performed hereunder to the date work is stopped bears to the entire work to be performed hereunder;
 - (iii) The goods or uncompleted portions of the goods shall be the property of Purchaser, and Seller shall safely hold the same for a reasonable time, subject to receipt of Purchaser's written shipping or other disposition instructions.

- (a) If the goods covered by this order are standard stock merchandise, Purchaser may terminate all or any part of the unshipped portion of this order at any time by written or telegraphic notice to Seller, and in such event Purchaser shall have no further obligation for cancellation charges or otherwise hereunder except to make payment, subject to other applicable terms hereof, for the goods actually shipped and in transit prior to such termination and to make payment for any goods as to which this order is not terminated which are shipped subsequent to such termination.
14. Seller shall indemnify and save Purchaser free and harmless from and against any and all claims, damages, liabilities or obligations of whatever kind, including but not limited to damage or destruction of property and injury or death of persons, resulting from or connected with Seller's performance hereunder or any default by Seller or breach of its obligations hereunder.
 15. This Purchase Order, together with any written documents which may be incorporated by specific reference, constitutes the entire agreement between the parties and supersedes all previous communications between them, either oral or written. All such previous communications are hereby abrogated and withdrawn, and no stipulations, representations or agreements by Purchaser or any of its officers, agents or employees shall be binding on the Purchaser unless contained in this Purchase Order or incorporated herein by reference as above provided and no local, general or trade custom or previous course of dealing or performance shall alter or vary the terms hereof.
 16. The waiver by Purchaser of any term, condition or provision herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any provision in any subsequent order.
 17. Purchaser will not be responsible for delay in receipt of Seller's invoices and required supporting documents. Should delay occur, time allowed by the Seller for payment of invoices or for accepting a cash discount offered, shall commence on the date invoiced, complete with any required supporting documents, are received by Purchaser.
 18. The laws of the State of Ohio shall govern the validity, interpretation and enforcement hereof.
 19. All plans, drawings, specifications and the subject matter contained therein and all other information given to Seller in connection with performance of this Purchase Order involve valuable proprietary rights of Purchaser and Engineer and shall be held confidential by Seller, shall remain the property of Purchaser and Engineer and shall not be used by Seller for any purposes other than those for which they have been supplied or prepared. Seller agrees that, as far as possible, it will keep confidential the making of this Order and the terms hereof. Seller agrees not to use for publicity purposes any photographs, drawings and/or materials in connection with the performance of this Order without obtaining the prior written consent of Purchaser and upon completion of this Order, Seller shall return all material given Seller as aforesaid.
 20. Seller shall take adequate measures to accomplish all elements of work required in connection with this Purchase Order within time limits which are compatible with the Schedule set forth in this Purchase Order, if any, and if no Schedule is included, within such time limits as are compatible with the shipping date specified therein. Such measures shall include, without limitation, expedition of its subcontractors for engineering and fabrication and expediting of its suppliers for materials and parts. Failure by Seller to perform all such activities so as to maintain scheduled completion of the order shall be considered a breach by Seller of its obligations under this Purchase Order. If required by Purchaser, Seller shall furnish a progress report each month which will show the scheduled start and completion dates and the percent completion for each of the following basic activities:
 - (a) Drawings and Technical Data (required for approval)
 - (b) Materials and Parts (required for manufacture)
 - (c) Production
 - (d) Scheduled to Ship

Seller shall also provide Purchaser's expediting representatives such information as they may request concerning the Seller's progress and schedule for the Purchase Order and shall accord the Purchaser's expediting representative full cooperation for their review and observation of Seller's engineering, materials acquisition and production activities at Seller's facilities as well as at the facilities of Seller's suppliers and subcontractors. If Purchaser determines that Seller is not meeting the requirements of the Schedule, Seller shall take such action as may be required by Purchaser to enable Seller to comply with the requirements of the Schedule.

21. Purchaser may at any time or from time to time issue written instructions requiring additions, changes, deletions or alterations in the work to be performed under this Purchase Order. Seller will proceed with the work as instructed immediately if requested to do so by Purchaser in writing. Within ten days after receipt of said instructions, Seller shall furnish to Purchaser a statement in detail of its estimate of the net increase or decrease in cost resulting from its compliance with said instructions. Failure to furnish said statement within the prescribed time shall be deemed to be the equivalent of the statement that there is no increase in cost. Purchaser will consider the statement as submitted and upon the basis thereof and of other such matter as may be relevant will determine the amount of increase or decrease in the Purchase Order price and shall issue a change order hereto providing for any such increase or

decrease in the Purchase Order price. If Seller objects to Purchaser's determination, it will so notify Purchaser in writing within ten days after receipt of acceptance of Purchaser's change order. If the Seller and Purchaser do not agree upon the increase or decrease, either party may pursue its legal remedies. Seller will continue to perform the work, including any such additions, changes, deletions or alterations despite any failure to agree upon the increase or decrease in the Purchase Order price, unless otherwise directed by Purchaser.

22. In the event drawings submitted by Seller are incomplete or otherwise fail to meet the requirements of the Purchase Order, Purchaser shall notify Seller of such deficiencies. If Seller fails to promptly correct such deficiencies, Purchaser may make such corrections and any engineering time expended by Purchaser in making such corrections will be accumulated and the cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order.
23. In the event of delay to Seller resulting from the acts of omission or commission of Purchaser or resulting from the acts of God, strikes, fire or other causes beyond Seller's reasonable control, Seller shall be entitled to an extension of time by the amount of time he is actually delayed thereby in the performance of the work, provided notice is given as hereinafter provided. Seller shall not be entitled to, and hereby waives any and all claims to, increased compensation for, or damages which he may suffer from any such causes. Seller shall not be entitled to any such extension of time for delays from any such causes unless he notifies Purchaser, in writing, within five days of the commencement of each such cause or the occurrence thereof, of the probable duration thereof, together with essential supporting data and thereafter promptly gives written notice of the termination thereof and requests an extension of time. If approved by Purchaser, a written extension of time for completing the work shall be granted for the period reasonably justified.
24. Non-Discrimination: During the performance of the Purchase Order and to the extent that Executive Order No. 11246 may be applicable to this Purchase Order, the Seller agrees as follows:
 - (a) The Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - (b) The Seller will, in all solicitations or advertisements for employees placed by or on behalf of the Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
 - (c) The Seller will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Seller's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (d) The Seller will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (e) The Seller will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Commission and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (f) In the event of the Seller's non-compliance with the non-discrimination clauses of this Purchase Order or with any of such rules, regulations, or orders, this Purchase Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
 - (g) The Seller will include the provisions of paragraph (a) through (f) hereof in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for non-compliance. provided that, in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Seller may request the United States to enter into such litigation to protect the interests of the United States.

[illegible]

(See Note Below:)

Vendor WESTINGHOUSE ELECTRIC CORP.Address 7710 READING RD.CINCINNATI, OHIO 45202KEI P.O. 7070-39556

Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. <u>✓</u>	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____	1. Weld Dep. Chem. _____
2. All Weld Metal Tensile-as welded <u>✓</u>	2. All Weld Metal Tensile-as welded _____	2. Weld Dep. Ferrite _____	2. All Weld Metal Tensile-as welded _____
3. All Weld Metal Tensile-stress relief <u>✓</u>	3. All Weld Metal Tensile-stress relief _____	3. Test 8A X-Ray _____	3. All Weld Metal Tensile-stress relief _____
4. All Weld Metal Impact-as welded <u>✓</u>	4. All Weld Metal Impact-as welded _____	4. Mill Test Report _____	4. All Weld Metal Impact-as welded _____
5. All Weld Metal Impact-stress relief <u>✓</u>	5. All Weld Metal Impact-stress relief _____	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray <u>✓</u>	6. Test X-Ray _____	1. Weld Dep. Chem. _____	5. All Weld Metal Impact-stress relief _____
7. Mill Test Reports <u>✓</u>	7. Mill Test Reports _____	2. Weld Dep. Ferrite _____	6. Test X-Ray _____
		3. Mill Test Report _____	7. Mill Test Report _____
		4. 10# Tube _____	8. 10# Tube _____
		5. Tagged Both ends _____	9. Tagged both ends _____

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. ND2h31.2b - 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. A. Puckett 9-22-80

WESTINGHOUSE ELECTRIC CORPORATION

ELECTRODE TEST REPORT

139610
DATE 10/30/80

SOLD TO HENRY J. KAISER P O BOX 201 U S ROUTE 52 MOSCOW, OHIO 45153		SHIPPED TO SAME	
CUSTOMER ORDER NO. 39556	SHIPPED FROM Montevallo, AL.	INVOICE NO. JN-50558	
WESTINGHOUSE ORDER 1A-98994	DATE OF SHIPMENT 10/30/80	WIRE HEAT NO. 39610	
GENERAL ORDER ITEM NO.	STYLE NO.	QUANTITY	SIZE
		TYPE	LOT NO.

Complies with Specification(s): TEST TP SFA 5.1 PER ASME CODE SEC. III

1. 22143 2000# 3/32" x 14" WIZ-18 0065 C1 22143
E-7018

ASME QUALITY SYSTEM CERTIFICATES N-2010 AND N-2011 EXPIRE 3 DECEMBER 1980.

MECHANICAL PROPERTIES AND RADIOGRAPHIC TESTS

LOT NO.	AS ** WELDED	STRESS *** RELIEVED
YIELD PSI	67,700 ✓	63,200 ✓
TENSILE PSI	75,800 ✓	73,800 ✓
1% ELONG. IN.	30 ✓	30 ✓
% RED. AREA	77	77

***Stress Relieved 8 Hours @ 1175°F.

X-Ray Satisfactory. ✓

**As Welded Charpy Impacts @ -20°F.

Ft. Lbs. - 82, 114, 31 ✓
Lateral Expansion (Mils) - 68, 80, 35 ✓
% Shear - 50, 50, 40 ✓

***Stress Relieved Charpy Impacts @ -20°F.

Ft. Lbs. - 255, 260, 210 ✓
Lateral Expansion (Mils) - 61, 87, 90 ✓
% Shear - 70, 70, 70 ✓

CHEMICAL ANALYSIS

C	.06
MN	.88
P	.02
S	.01
SI	.41 ✓
NI	.10 ✓
CR	.07 ✓
MO	.01 ✓
V	.01 ✓
Deposited Weld Metal	Core Wire Analysis



Cu .07
11-5-80

We certify that the contents of this report are correct and accurate, and that the test results and operations performed by Westinghouse or its subcontractors, as reported, are in compliance with the material specification and applicable material requirements of Section III of the ASME Boiler and Pressure Vessel Code as designated by the Customer.

Date 10/30/80

by E. G. Regan A. A. Myers
Westinghouse Electric Corporation

WM. H. ZINNIE NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. SFA 5.1 E7018
 Component Name Weld Filler Material
 Supplier WESTINGHOUSE ELECTRIC Prepared By J. Deervester

PO No. 7070-39556
 MR No. 64775
 Inspection Plan No. QAW 113
 Page 1 of 1
 Date 5-14-76 REV. 1

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.	Visual		11-7-80	
2	Proper marking, per code specification, on individual containers including SFA specification. Record Heat Nos., Lot No. by size. <u>3/32" LOT# 0065-C1-22143</u>	Visual		11-7-80	
3	Tagged (Both ends as required).	Visual	N/A	11-7-80	
4	Received from KEI approved supplier (applies to manufacturer and distributor).			11-7-80	
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).	Visual		11-7-80	
6	Dimensional, except sealed material. Do not open sealed cans.		N/A	11-7-80	

APPROVED:

M. J. Friedrich
 QA Manager

APPROVED FOR FILING:

J. Deervester
 QAE

11-7-80
 DATE

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENTP. O. BOX 201
Moscow, Ohio 45153**HENRY J. KAISER
COMPANY**

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light CompanyPURCHASE
ORDER NO. 7070-39971

SHEET 1 OF 1

THIS ORDER NUMBER MUST APPEAR
ALL INVOICES, PACKAGES, PACK
SLIPS, BILLS OF LADING, ETC.

Date: 12/5/80

SELLER

Westinghouse Electric Supply Co.
4545 Chickering Ave.
Cincinnati, Ohio 45232

Attention:

Phone: 542-4300

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:EXHIBIT "A" - SPECIFICATION NO.
EXHIBIT "B" - TERMS AND CONDITIONS
EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: 12/17/80

TERMS OF PAYMENT: Net 30

PRICE POLICY:

POINT OF ORIGIN:

F.O.B. POINT: Montavello, Ala.

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
			Welding "Essential Nuclear Material"			
1.	2,500	Lbs.	#E7018 - 3/32" coated welding electrode in accordance with ASME Code SFA 5.1 (per attached copy) with full nuclear certification and packaged in hermetically sealed cans	\$.632	\$ 1,580.00	7811.9834.31
2.	3,000	Lbs.	#E7018 - 1/8" coated welding electrode in accordance with ASME Code SFA 5.1 (per attached copy) with full nuclear certification and packaged in hermetically sealed cans	.445	1,335.00	
ESSENTIAL CONFIRMING DC NOT DUPLICATE INSPECT TO INSTRUCTION SALES OR USE TAX EXEMPTION: THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EXCISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS: 98000298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.						
				TOTAL OF ORDER	\$ 2,915.00	

Materials or services supplied on this purchase order shall comply with provisions of NRC Regulation 10 CFR Part 21, Notification and Reporting of Defects and Non-compliance.

REQ. NO. 37700/37800 SPEC. NO.

PROJECT ENGINEER W. Puckett
KC:lc
12/5/80

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTH. SIGNED SIGNATORY

(See Note Below:)

Vendor WESTINGHOUSE ELECTRIC

Address 4545 CHICKERING AVE.
CINCINNATI, OHIO 45232

KEI P.O. 7070-39971

Requested by _____

Page 2 of 2

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. O. Fuchette - 11-5-80

(See Note Below:)

 Vendor _____
 Address _____

 KEI P.O. _____
 Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test SA X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	SFA 5.9 Stainless Steel Bare Wire	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐		5. All Weld Metal Impact-stress relief ☐
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	6. Test X-Ray ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	7. Mill Test Report ☐
		3. Mill Test Report ☐	8. 10# Tube ☐
		4. 10# Tube ☐	9. Tagged both ends ☐
		5. Tagged Both ends ☐	

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

 Reviewed and Checked by W. O. P. Webb - 11-5-80

TERMS AND CONDITIONS

THIS PURCHASE ORDER IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

In the event Seller's Quotation, acknowledgment, confirmation, invoice or other form states terms additional to or different from those set forth herein, this Purchase Order shall be deemed a notification of objection to such additional and/or different terms and a rejection thereof. This Purchase Order constitutes an offer to purchase, and not an acceptance of any offer to sell, the goods and any services described herein which may be accepted only in accordance with its terms and without modification, addition, deletion or alteration. In the absence of written acceptance or other written confirmation hereof by Seller, the commencement of any work by Seller in pursuance of this order or the making of any deliveries by Seller of the goods and services described herein shall be deemed an acceptance hereof and a contract shall be formed only upon the terms and conditions set forth herein.

1. As used herein, the term "Purchaser" means the party designated as such on the face of this purchase order; the term "Seller" means the party designated as such on the face of this order, and the term "Engineer" means Sargent and Lundy.
2. This purchase order, when properly signed by Purchaser and bearing an order number, is the only authorization which will be recognized by Purchaser for charges to its account.
3. Neither the quantity nor quality of the goods delivered by Seller to Purchaser shall differ from those specified on the face hereof, nor shall any other modifications of this purchase order be effective unless such changed quantity or other modification is first ordered by Purchaser by written change order. Seller shall make no shipment of non-conforming goods, whether as an accommodation or otherwise, unless first authorized in writing by Purchaser.
4. Seller shall properly package all goods for safe shipment to the Purchaser and a notice of shipment shall be sent by Seller to Purchaser at the time the goods described herein are shipped which shall state the number of the order, the kind of goods, the Seller's name and the carrier and route by which the shipment is being made.
5. Seller warrants that any transportation costs included in the price will not exceed actual transportation costs paid by Seller. If this order calls for payment of any transportation costs by Purchaser, Purchaser shall in no event be liable or accountable for any amount in excess of the actual costs of transportation. Seller shall be accountable for and pay any excess transportation costs arising from Seller's failure to make delivery to the F.O.B. Point or to follow shipping instructions furnished by Purchaser.
6. In placing this Purchase Order, Purchaser is relying on Seller's skill and judgment in selecting and providing the proper goods and any applicable services for Purchaser's particular use. Seller warrants to Purchaser and its successors in interest that the goods and any services covered hereby will correspond with the description of the same on the face of this order, will conform to any applicable specifications, shall be new and of the best quality unless otherwise specified, and will be fit for the purpose for which they are furnished. Seller also warrants said goods are free and clear of all liens and encumbrances whatsoever and that Seller has a good and marketable title to same, and Seller agrees to hold Purchaser free and harmless against any and all claims to said merchandise.
7. Seller represents that it has fully investigated all specifications, including any furnished by Purchaser, in connection with the goods, and based on such investigation and its past experience and superior knowledge with respect to such goods, has determined that the production thereof will not infringe any patent, trademark, trade secret or copyright. Seller warrants to Purchaser and its successors in interest that the sale or use of the goods and any services covered by this order, whether manufactured in accordance with Purchaser's specification or otherwise, do not and will not infringe upon any patent, trademark, trade secret or copyright and Seller shall defend, indemnify and hold Purchaser and its successors in interest free and harmless from and against any and all claims, demands, costs and liabilities, including legal expenses, arising out of any such infringement or claim of infringement. Purchaser is relying upon the experience, skill and superior knowledge of Seller with respect to the goods and makes no representation that Seller will be safe in manufacturing the goods as required under this order. In no event shall Purchaser or its successors in interest be liable to Seller for any patent, copyright, trade secret or trademark infringement or claim thereof. In the event Purchaser and/or its successors in interest is or are enjoined from the operation, use and/or sale of the goods or any services, or any part thereof, covered by this order, Seller shall (at its sole expense) take all reasonable steps possible to procure for Purchaser and its successors in interest the right to operate, use and sell said goods or any services, or any part thereof, covered by this order. If Seller cannot so procure the aforesaid right within a reasonable time, Seller shall then promptly (at Seller's sole expense):
 - (a) Modify said goods or services, or any part thereof, so as to avoid infringement of any patent or other proprietary interest, or
 - (b) Replace said goods or services, or any part thereof, with goods or services which do not infringe or violate any said patent or other proprietary interest, or
 - (c) Remove said goods or services, or any part thereof, and refund any compensation heretofore paid to Seller and pay to Purchaser any transportation costs and expenses that may have been paid or incurred by Purchaser in connection with the goods or any services, or any part thereof, so removed.

9. Seller shall assume and pay any and all loss or damage to the goods from any cause whatsoever until Purchaser takes delivery of the goods at the point of ultimate destination. Notwithstanding the foregoing or any terms of shipment, title to the goods shall pass from Seller to Purchaser when the goods are transferred at the point of origin to railcar, truck, or other transportation facility.

9. Seller warrants and agrees that all goods delivered pursuant to this order shall be produced, sold and delivered to Purchaser in compliance with and conforming to all applicable laws and governmental orders, rules and regulations, and that the prices for such goods are not in excess of any applicable prices established by law or governmental regulation. Seller shall furnish to Purchaser upon request certificates or other evidence showing compliance with this Article.

10. Purchaser shall have the right to perform such examination, inspection and tests of equipment material and workmanship as he may desire to assure himself that the goods meet all specified requirements of the Purchase Order. The Seller shall upon reasonable notice permit unrestricted access to the Purchaser or his duly authorized representative(s) to his place of manufacture and to that of his sub-suppliers for the purpose of conducting such examination, inspection and tests at any and all times that the goods are in the process of manufacture, fabrication, assembly, testing or inspection. The Seller shall provide the Purchaser with sufficient, safe and proper facilities for the performance of said inspection.

Inspection documents in the quality control files of the Seller and his sub-suppliers which relate to work performed under the Purchase Order shall be accessible for examination by the Purchaser.

The Purchaser or his duly authorized representative shall have authority to reject materials or workmanship which are defective or not in accordance with the Purchase Order and to require their correction. Any material or work which is found defective or in nonconformance with the Purchase Order requirements, shall be satisfactorily corrected or replaced by the Seller without cost to the Purchaser.

Notwithstanding any prior payment therefor, all goods are subject to inspection and testing by Purchaser after arrival at the ultimate destination. If the goods are to be incorporated into a plant or other operating facility, Purchaser's inspection and testing of the goods may be made under operating conditions after the goods have been installed. If upon inspection or testing such goods or any portion thereof are found to be non-conforming, unsatisfactory, defective, of inferior quality or workmanship or fail to meet any guarantees or operating or other specifications contained herein or any other requirements of this Purchase Order, then without prejudice to any other rights or remedies, Purchaser may return the goods or any part thereof to Seller, and all amounts heretofore paid by Purchaser to Seller on account of the purchase price of such returned goods, together with any costs incurred by Purchaser in connection with the original delivery or return of such goods, shall be repaid to Purchaser by Seller. Neither the inspection nor failure to make inspection nor acceptance of goods shall release Seller from any of the warranties or other provisions of this order nor impair Purchaser's right to reject nonconforming goods. Purchaser reserves the right, even after it has paid for and accepted said goods, to make a claim against Seller on account of any goods which do not prove to be satisfactory or are defective, irrespective of Purchaser's failure to notify Seller or a rejection of nonconforming goods or revocation of acceptance thereof, or to specify with particularity any defect in nonconforming goods after rejection or acceptance thereof.

11. Seller warrants that all goods will be of the best quality and satisfactory to Purchaser in every particular, and agrees promptly and at his own expense, either to repair any part of the goods which during the first year of actual use is found to be defective or otherwise unsuitable for the purposes contemplated by this Purchase Order, or to replace such part of the goods by shipping to Purchaser a new part under the same terms as apply hereunder to the shipment of the original part. Seller shall also reimburse Purchaser for any costs incurred by Purchaser in connection with the repair and/or replacement of defective or unsuitable goods including without limitation the cost of materials necessarily damaged by such remedying or replacing of such defective or unsuitable goods. A similar warranty shall apply to any replacement parts.

12. Time is of the essence hereof. If Seller shall default in performance hereof or breach any of its obligations hereunder or if Seller becomes insolvent or a trustee or a receiver of Seller's business or assets is appointed by any court or if Seller shall make an assignment for the benefit of creditors, then in any of such events Purchaser may cancel this order in whole or in part by written or telegraphic notice to Seller, and Purchaser shall have no liability or obligation whatsoever to Seller by reason of or resulting from such cancellation, but at Purchaser's sole election it may pay Seller its actual direct out-of-pocket costs of performance hereunder to the date of such cancellation, as approved by Purchaser, in which event the goods or uncompleted portions of the goods shall be the property of Purchaser and Seller shall safely hold the same for a reasonable time subject to receipt of Purchaser's written shipping instructions or other disposition instructions.

13. In addition to and without prejudice to the right to cancel under Article 12, Purchaser may terminate this order in accordance with the following provisions:

(a) If this order covers goods manufactured or fabricated to Purchaser's specifications, then at any time prior to delivery of all goods covered by this order Purchaser may terminate this order in whole or in part by written or telegraphic notice to Seller, and in such event the following provisions shall apply:

(i) Immediately upon receipt of such notice of termination or upon such other date as may be specified in said notice, Seller shall stop all work in connection with this order except as otherwise directed by Purchaser;

(ii) Purchaser shall pay and Seller shall accept as full compensation Seller's actual direct out-of-pocket costs to the date work is stopped, including Seller's reasonable expense in connection with termination of any sub-contracts, all as approved by Purchaser, plus 6% of such costs, provided, however, that in no event shall the total amount to be paid to Seller upon such termination plus payments previously made exceed that proportion of the aggregate total purchase price specified herein that the work actually performed hereunder to the date work is stopped bears to the entire work to be performed hereunder;

(iii) The goods or uncompleted portions of the goods shall be the property of Purchaser, and Seller shall safely hold the same for a reasonable time, subject to receipt of Purchaser's written shipping or other disposition instructions.

- (b) If the goods covered by this order are standard stock merchandise, Purchaser may terminate all or any part of the unshipped portion of this order at any time by written or telegraphic notice to Seller, and in such event Purchaser shall have no further obligation for cancellation charges or otherwise hereunder except to make payment, subject to other applicable terms hereof, for the goods actually shipped and in transit prior to such termination and to make payment for any goods as to which this order is not terminated which are shipped subsequent to such termination.
14. Seller shall indemnify and save Purchaser free and harmless from and against any and all claims, damages, liabilities or obligations of whatever kind, including but not limited to damage or destruction of property and injury or death of persons, resulting from or connected with Seller's performance hereunder or any default by Seller or breach of its obligations hereunder.
15. This Purchase Order, together with any written documents which may be incorporated by specific reference, constitutes the entire agreement between the parties and supersedes all previous communications between them, either oral or written. All such previous communications are hereby abrogated and withdrawn, and no stipulations, representations or agreements by Purchaser or any of its officers, agents or employees shall be binding on the Purchaser unless contained in this Purchase Order or incorporated herein by reference as above provided and no local, general or trade custom or previous course of dealing or performance shall alter or vary the terms hereof.
16. The waiver by Purchaser of any term, condition or provision herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any provision in any subsequent order.
17. Purchaser will not be responsible for delay in receipt of Seller's invoices and required supporting documents. Should delay occur, time allowed by the Seller for payment of invoices or for accepting a cash discount offered, shall commence on the date invoices, complete with any required supporting documents, are received by Purchaser.
18. The laws of the State of Ohio shall govern the validity, interpretation and enforcement hereof.
19. All plans, drawings, specifications and the subject matter contained therein and all other information given to Seller in connection with performance of this Purchase Order involve valuable proprietary rights of Purchaser and Engineer and shall be held confidential by Seller, shall remain the property of Purchaser and Engineer and shall not be used by Seller for any purposes other than those for which they have been supplied or prepared. Seller agrees that, as far as possible, it will keep confidential the making of this Order and the terms hereof. Seller agrees not to use for publicity purposes any photographs, drawings and/or materials in connection with the performance of this Order without obtaining the prior written consent of Purchaser and upon completion of this Order, Seller shall return all material given Seller as aforesaid.
20. Seller shall take adequate measures to accomplish all elements of work required in connection with this Purchase Order within time limits which are compatible with the Schedule set forth in this Purchase Order, if any, and if no Schedule is included, within such time limits as are compatible with the shipping date specified therein. Such measures shall include, without limitation, expediting of its subcontractors for engineering and fabrication and expediting of its suppliers for materials and parts. Failure by Seller to perform all such activities so as to maintain scheduled completion of the order shall be considered a breach by Seller of its obligations under this Purchase Order. If required by Purchaser, Seller shall furnish a progress report each month which will show the scheduled start and completion dates and the percent completion for each of the following basic activities:
- (a) Drawings and Technical Data (required for approval)
 - (b) Materials and Parts (required for manufacture)
 - (c) Production
 - (d) Scheduled to Ship
- Seller shall also provide Purchaser's expediting representatives such information as they may request concerning the Seller's program and schedule for the Purchase Order and shall accord the Purchaser's expediting representative full cooperation for their review and observation of Seller's engineering, materials acquisition and production activities at Seller's facilities as well as at the facilities of Seller's suppliers and subcontractors. If Purchaser determines that Seller is not meeting the requirements of the Schedule, Seller shall take such action as may be required by Purchaser to enable Seller to comply with the requirements of the Schedule.
21. Purchaser may at any time or from time to time issue written instructions requiring additions, changes, deletions or alterations in the work to be performed under this Purchase Order. Seller will proceed with the work as instructed immediately if requested to do so by Purchaser in writing. Within ten days after receipt of said instructions, Seller shall furnish to Purchaser a statement in detail of its estimate of the net increase or decrease in cost resulting from its compliance with said instructions. Failure to furnish said statement within the prescribed time shall be deemed to be the equivalent of the statement that there is no increase in cost. Purchaser will consider the statement as submitted and upon the basis thereof and of other such matter as may be relevant will determine the amount of increase or decrease in the Purchase Order price and shall issue a change order hereto providing for any such increase or

decrease in the Purchase Order price. If Seller objects to Purchaser's determination, it will so notify Purchaser in writing within ten days after receipt of acceptance of Purchaser's change order. If the Seller and Purchaser do not agree upon the increase or decrease, either party may pursue its legal remedies. Seller will continue to perform the work, including any such additions, changes, deletions or alterations despite any failure to agree upon the increase or decrease in the Purchase Order price, unless otherwise directed by Purchaser.

22. In the event drawings submitted by Seller are incomplete or otherwise fail to meet the requirements of the Purchase Order, Purchaser shall notify Seller of such deficiencies. If Seller fails to promptly correct such deficiencies, Purchaser may make such corrections and any engineering time expended by Purchaser in making such corrections will be accumulated and the cost thereof and any other costs incurred by Purchaser in making such corrections will be deducted from payments to be made to Seller under the Purchase Order.
23. In the event of delay to Seller resulting from the acts of omission or commission of Purchaser or resulting from the acts of God, strikes, fire or other causes beyond Seller's reasonable control, Seller shall be entitled to an extension of time by the amount of time he is actually delayed thereby in the performance of the work, provided notice is given as hereinafter provided. Seller shall not be entitled to, and hereby waives any and all claims to, increased compensation for, or damages which he may suffer from any such causes. Seller shall not be entitled to any such extension of time for delays from any such causes unless he notifies Purchaser, in writing, within five days of the commencement of each such cause or the occurrence thereof, of the probable duration thereof, together with essential supporting data and thereafter promptly gives written notice of the termination thereof and requests an extension of time. If approved by Purchaser, a written extension of time for completing the work shall be granted for the period reasonably justified.
24. Non-Discrimination: During the performance of the Purchase Order and to the extent that Executive Order No. 11246 may be applicable to this Purchase Order, the Seller agrees as follows:
 - (a) The Seller will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Seller will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Seller agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - (b) The Seller will, in all solicitations or advertisements for employees placed by or on behalf of the Seller, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
 - (c) The Seller will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Seller's commitments under Section 702 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (d) The Seller will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (e) The Seller will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Commission and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (f) In the event of the Seller's non-compliance with the non-discrimination clauses of this Purchase Order or with any of such rules, regulations, or orders, this Purchase Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
 - (g) The Seller will include the provisions of paragraph (a) through (g) hereof in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 704 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Seller will take such action with respect to any subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance, provided that, in the event the Seller becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Seller may request the United States to enter into such litigation to protect the interests of the United States.

(See Note Below:)

Vendor WESTINGHOUSE ELECTRIC

Address 4545 CHICKERING AVE.
CINCINNATI, OHIO 45232

KEI P.O. 7070-39971

Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test BA X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10' Tube ☐	8. 10' Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b- 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. O. Puchette, H-1-80

Required Delivery PLEASE-RUSH-ASAP

HENRY J. KAISER COMPANY

P.O. BOX 201, MOSCOW, OHIO 45153

INQUIRY, REQUISITION, & RECOMMENDATION TO PURCHASE

(10)

Page 1 of 2

Inq./Req. No. 7070-57781

Date November 5, 1980

Material Welding electrode.

Type of Quotation: Verbal ☐ Written ☐

Engineering Review Required ☐

Approval prior to award required ☐

ESSENTIAL

To be used for Welding

Coded by

Bid No.

Bid No.

Bid No.

Westinghouse

Wright

Murphy

(MURPHY)

Attention Janet Tumbleson

Item No.	Quantity	Unit	Description Give Complete Data-Drawing Number, Etc.	Account Number	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1	2,500	lbs.	#E7018 - 3/32" Coated Welding electrode in accordance with ASME Code SFA 5.1 with full nuclear certification and packaged in 10 hermetically sealed cans.	2811983431	.632	1580.00	.78	1950.00	1.022	2555.00
			Alloy Rods							
			Weldro							
			768/lb. 1920.00							
			211K5 AKO							

Originator W.O. Puckett - H-7-80

Approved [Signature]

Total 1580.00

1950.00

2555.00

Item No. Purchase Order or Sub Contract Recommend To Be Placed With

P. O. No.

F. O. B.

Terms

Shipping

Shipping Point

Price Policy

Monteval, Ala.

Net 30

101KARO

12/17/80

Jobsite

Net 30

101K

Jobsite

Net 30

3-4 AKO

TO BE PURCHASED
FROM APPROVED VENDOR
ONLY

Quality Assurance Requirement

Yes, see reverse side of

Requisition

U No. O. A. Equipment

[Signature] H-7-80

Reason Supplier

Selected

☒ Lowest Price

☐ Required Design

☐ Only Source Known

☐ Early Delivery

☐ Conformance to G. A. Requirement

Remarks

Prepared By

Purchasing Agent

APPROVED:

Procurement Mgr.

Administrative Mgr.

KMC

11/24/80

[Signature]

(See Note Below:)

Vendor _____

Address _____

KEI P.O. _____

Requested by _____

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test 8A X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test Report ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. ND2h31.2b - 8 hrs. @ required temperature
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. O. P. Lett - 11-5-60

ADDRESS ALL CORRESPONDENCE TO
HENRY J. KAISER COMPANY
PROCUREMENT DEPARTMENT
P.O. BOX 201
MOSCOW, OHIO 45153

PHONE:
CABLE: KAISENGS
TELEX:

HENRY J. KAISER COMPANY
Agent For:
The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

CHANGE NO. _____
PURCHASE
ORDER NO. 7070-39971

SHEET 1 OF 1
THIS ORDER NUMBER MUST APPEAR
ALL INVOICES, PACKAGES, PACK
SLIPS, BILLS OF LADING, ETC.

PURCHASE ORDER CHANGE

DATE 12/17/80 TO BE SHIPPED N/C

SELLER

Westinghouse Electric Supply Co.
4545 Chickering Ave.
Cincinnati, Ohio 45232

Attention:

Phone: 542-4300

WORK ORDER NO. _____

ITEM NO. _____

PLEASE MAKE THE FOLLOWING CHANGES IN THE ABOVE PURCHASE ORDER DATED 12/5/80

This Change "A" is issued to change vendor name to read as follows:

Westinghouse Electric Corp.
7719 Reading Rd.
Cincinnati, Ohio 45202

ESSENTIAL

INSPECT TO INSTRUCTION

KEI QAW 113

QAE 12-19-80

All other terms and conditions of original order remain unchanged.

QA APPROVED

QA RECEIVING INSPECTION

☒ REQUIRED ☐ NOT REQUIRED

12-19-80
KEI QA ENGINEER

SALES OR USE TAX EXEMPTION

THE PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, EX-
CISE AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE
OHIO SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT
PERMITS 198000298 ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.

REVISED TOTAL
OF ORDER

No Change

INVOICE PURCHASER

AND MAIL FIVE (5) COPIES WITH
ORIGINAL BILL OF LADING TO:

REQ. NO. 37799/ SPEC. NO. 37800

PROJECT ENGINEER W. Puckett
KE-10

PURCHASER
HENRY J. KAISER COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

P. O. K.

HENRY J. KAISER COMPANY

Moscow, Ohio

MATERIAL RECEIVED REPORT

M.R. NO.: 65539

PAGE 1 OF 1

THIS ORDER IS:

COMPLETE ☒
 NOT COMPLETE ☐
 REC. DAMAGED ☐

P. O. NO.: 7070-39971

REQ. NO.: 7070-37799/37800

DAMAGE REPORT NO. N/A DATE RECEIVED: 12-17-80

ORDERED FROM: Westinghouse Electric Supply Co.

Cincinnati, Ohio

SHIPPED BY: Same

SHIPPED TO: Jobsite PACKING SLIP NO.:
 VIA: Roadway Express F.O.B. POINT: Montavello, Ala.

CARRIER	Roadway Express
FREIGHT BILL	NO. 421-310177
EXPRESS BILL	WGT. 5770#
PARCEL POST	DATE 12-17-80
PREPAID	AMT. \$ 232.80
COLLECT	AMT. \$
RAIL LINE	
CAR NO.	
DOCK NO.	

P.O. ITEM NO.	QUANTITY	UNIT	DESCRIPTION	LOCATION	ACCOUNT NO.
			Welding "Essential Nuclear Material"		
1	2500	Lbs.	#E7018 - 3/32" coated welding electrode WIZ-18, Lot No. 0065C122143 ✓	Whse Stock	7811.9834.3
2	3000	Lbs.	#E7018 - 1/8" coated welding electrode WIZ-18, Lot No. 0280C122144 ✓		

DWG. NO. _____

B.M. O. _____

REQ. ORIGINATOR W. Puckett

INSPECTED TO
 KEI *QAW/13*
 DATE *12-24-80* STAMP

QUALITY ASSURANCE INSPECTOR

Belinda Stone 12-23-80

CHECKED BY

ASST. WHSE. SUPT.

WAREHOUSE SUPT.

WESTINGHOUSE ELECTRIC CORPORATION

ELECTRODE TEST REPORT

DATE 12/11/80

SOLD TO KAISER ENGINEERING P O BOX 201 U S ROUTE 52 MOSCOW, OHIO 45153		SHIPPED TO SAME	
CUSTOMER ORDER NO. 39971	SHIPPED FROM Montevallo, Al.	INVOICE NO. JN-50953	
WESTINGHOUSE ORDER 1A-99334	DATE OF SHIPMENT 12/12/80	WIRE HEAT NO. 39800	
GENERAL ORDER ITEM NO.	STYLE NO.	QUANTITY	SIZE
		TYPE	LOT NO.

Complies with Specification(s): ASME SEC. II, PART C & ASME SEC. III, 1977 EDITION,
WINTER 79 ADDENDA. SFA 5.1

2. 22144 3000# 1/8" x 14" WIZ-18 0280 C1 22144
E-7018

ONE QUALITY SYSTEM CERTIFICATES N-2010 AND N-2011 EXPIRE 3 DEC 1980. (EXTENDED) -ok

TENSILE	** AS WELDED	STRESS RELIEVED 8 HRS. @ 1150 °F ***	CHEMICAL ANALYSIS: WELD WIRE			
TENSILE (PSI)	63,700	65,700	C	.04	Cr+Ti	
YIELD (PSI)	70,700	72,800	Mn	.58	Ti	
ELONGATION (%)	35	30	Si	.31	Co	
REDUCED AREA (%)	77	74	P	.01	N	
			S	.01		
			Cr	.08		
			Ni	.11		
			Mo	.02		
			V	.01		
			Cu	.16		

X-Ray Satisfactory.

**As Welded Charpy Impacts @ -20°F.

Ft. Lbs. - 125, 114, 82
Lateral Expansion (Mils) - 91, 83, 63
% Shear - 60, 60, 50

***Stress Relieved Charpy Impacts @ -20°F.

Ft. Lbs. - 23, 123, 132
Lateral Expansion (Mils) - 21, 98, 92
% Shear - 10, 60, 70



12-17-80

I certify that the contents of this report are correct and accurate, and that the test results and operations performed by Westinghouse or its subcontractors, as reported, are in compliance with the material specification and applicable material requirements of Section III of the ASME Boiler and Pressure Vessel Code as designated by the Customer.

Date 12-10-80

by

E. G. Pigan
Westinghouse Electric Corporation
E.A. Pigan, Q.A. Manager

WESTINGHOUSE ELECTRIC CORPORATION

ELECTRODE TEST REPORT

DATE 12/11/80

SOLD TO KAISER ENGINEERING P O BOX 201 U S ROUTE 52 MOSCOW, OHIO 45153		SHIPPED TO SAME	
CUSTOMER ORDER NO. 39971	SHIPPED FROM Montevallo, Al.	INVOICE NO. JN-50953	
WESTINGHOUSE ORDER 1A-99334	DATE OF SHIPMENT 12/12/80	WIRE HEAT NO. 39610	

GENERAL ORDER ITEM NO.	STYLE NO.	QUANTITY	SIZE	TYPE	LOT NO.
------------------------	-----------	----------	------	------	---------

Complies with Specification(s): ASME SEC. II, PART C & ASME SEC. III, 1977 EDITION, WINTER 79 ADDENDA. SFA 5.1

1.	22143	2500#	3/32" x 1 1/2"	WIZ-18 E-7018	0065 C1 22143
----	-------	-------	----------------	------------------	---------------

ASME QUALITY SYSTEM CERTIFICATES N-2010 AND N-2011 EXPIRE 3 DEC 1980. (EXTENDED)

TENSILE	** AS WELDED	STRESS RELIEVED *** 8 HRS. @ 1175 °F	CHEMICAL ANALYSIS: WELD WIRE	
YIELD (PSI)	67,700 ✓	63,200 ✓	C	.06
TENSILE (PSI)	75,800 ✓	73,800 ✓	Mn	.88 ✓
ELONGATION (%)	30 ✓	30 ✓	Si	.41 ✓
RED. AREA (%)	77	77	P	.02
			S	.01
			Cr	.07 ✓
			Ni	.10 ✓
			Mo	.01 ✓
			V	.01 ✓
			Cu	.07

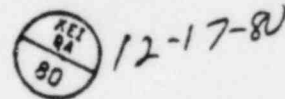
X-Ray Satisfactory. ✓

**As Welded Charpy Impacts @ -20°F

Ft. Lbs.	-	82,	114,	31
Lateral Expansion (Mils)	-	68,	80,	35
% Shear	-	50,	50,	40

***Stress Relieved Charpy Impacts @ -20°F

Ft. Lbs.	-	255,	260,	210
Lateral Expansion (Mils)	-	61,	87,	90
% Shear	-	70,	70,	70



I certify that the contents of this report are correct and accurate, and that the test results and operations performed by Westinghouse or its subcontractors, as reported, are in compliance with the material specification and applicable material requirements of Section III of the ASME Boiler and Pressure Vessel Code as designated by the Customer.

Date 12-10/80

by E.A. Pigan
 Westinghouse Electric Corporation
 E.A. Pigan, Q.A. Manager



Westinghouse
Electric Corporation

7710 Reading Road
Cincinnati, Ohio 45222

December 17, 1980

(513) 948-7223

HENRY J. KAISER COMPANY
P.O. Box 201
Moscow, Ohio 45153

Attention: Ms. Kathi Collins

SUBJECT: SFA 5.1 Certification

Dear Ms. Collins,

This verifies that material shipped on Purchase Order No. 39971 complies with above specifications. Copy of same is in rail. (E7018 - 3/32" and 1/8").

Very truly yours,

A handwritten signature in cursive script, appearing to read 'R. V. Martone'.

R. V. Martone
Special Representative
WELDING PRODUCTS

RVM/sh

WM. H. ZIMMER NUCLEAR POWER STATION

RECEIVING INSPECTION PLAN

Specification/Drawing No. SFA 5.1

Component Name Weld Filler Material

Supplier WESTINGHOUSE ELECTRIC

Prepared By J. Deerwester

PO No. 7070-39971

MR No. 85539

Inspection Plan No. QAW 113

Page 1 of 1

Date 5-14-76 REV. 1

ITEM	INSPECTION REQUIREMENT	INSPECTION METHOD	INSPECTION STAMP	DATE	REMARKS
1	Transit damage and condition of containers.	Visual		12-24-80	
2	Proper marking, per code specification, on individual containers including SFA specification. Record Heat Nos., Lot No. by size. <u>3/32" LOT # 0065C122143</u> <u>1/8" LOT # 0280C122144</u>	Visual		12-24-80	
3	Tagged (Both ends as required).	Visual	N/A	12-24-80	
4	Received from KEI approved supplier (applies to manufacturer and distributor).			12-24-80	
5	Certified test report meets the specification requirements and all submittals comply with attached check list. (QAE will review and stamp).	Visual		12-24-80	
6	Dimensional, except sealed material. Do not open sealed cans.		N/A	12-24-80	

APPROVED:

M. J. Fredrick
QA Manager

APPROVED FOR FILING:

[Signature]
QAE

12-24-80
DATE

A-34

CERTIFIED MATERIALS TEST REPORT

KAISER ENGINEERS INC.
U.S. RT. 52
MOSCOW, OHIO 45153

Customer Order No. 40318

Order No. 195808

Shipped: 1-15-81

This Material Conforms to Specification
ASME SFA 5.1 Sec. II Part C & ASME B&PV
Sec. III 1980 Ed. thru Summer 1980 Add.

Trade Name
or Trademark: Atom Arc 7018

Diameter Size: 1/8"

Weight: 2200 lbs.

Lot Number: 1K010T01

Heat Number: 421L4771

Type: E 7018

Test No. 5707

Control No. ZZZ081

X-Rays Satisfactory

Moisture @ 1800° F. 0.17%
Concentricity 3%
Type Steel A-285

Test No.	Full	Split	Volts	Amps
Tensiles & Impacts	1	6	24	145 DC+

Test Results:	As Welded	Stress Relieved
Yield	66,600	8 Hrs. @ 1150° F. 58,100
Tensile	79,500	74,100
Elongation	32.0%	32.0%
Red. of Area	77.3%	78.4%

Charpy V-Notch Impacts Tested @ -20° F.
Impacts 183-152-155-149-91/40-94-128-183-193
Lat. Exp. 90-87-83-74-69 36-76-91-79-87
% Shear 100-80-80-80-40 15-30-60-80-100

Tensile Specimen .252"
Impact Specimen .394" x .394"

Carbon	.03
Manganese	1.00
Chromium	.04
Nickel	.03
Silicon	.34
Columbium+	
Tantalum	
Molybdenum	.02
Tungsten	
Copper	.03
Titanium	
Phosphorus	.012
Sulphur	.014
Vanadium	.01
Cobalt	

Ferrite:

Filletts: OK Vertical & Overhead

State of Pennsylvania }
County of York } SS

Subscribed and sworn to before me
this 15th day of January, 1981

SEAL.....
Notary Public

My Commission expires: 11/22/82

1-20-81

Quality Systems No. N-1224
Expiration Date: September 8, 1981

The undersigned certifies that the
contents of this report are correct
and accurate and that all operations
performed by the undersigned or sub
contractors are in compliance with
requirements of the material speci-
fication and ASME Boiler and Pressure
Vessel Code Section III Division 1
Subsection NCA-3800

ALLOY RODS DIVISION
Chemetron Corporation

BY.....
J. L. Starnier

CERTIFIED MATERIALS TEST REPORT

KAISER ENGINEERS INC.
U.S. RT. 52
MOSCOW, OHIO 45153

Customer Order No. 40318

Order No. 195808

Shipped: 1-15-81

This Material Conforms to Specification
ASME SFA 5.1 Sec. II Part C & ASME B&P
Sec. III 1980 ED Thru Summer 1980 Add

Trade Name
or Trademark: Atom Arc 7018

Diameter Size: 3/32"

Weight: 1550 lbs.

Lot Number: 2J029Q01

Heat Number: 421L0131

Type: E-7018

Test No. 5642

Control No. ZZZ039

X-Rays Satisfactory

Moisture @ 1800° F. 0.18%
Concentricity 3%
Type Steel A-285

Test No.	Full	Split	Volts	Amps
Tensiles & Impacts	1	6	20	115 D

Test Results:	As Welded	Stress Relieved
Yield	64,500	8 Hrs. @ 1150° F.
Tensile	77,200	58,500
Elongation	32.0%	74,100
Red. of Area	81.0%	34.0%
		79.2%

Charpy V-Notch Impacts Tested @ -200° F.
Impacts 49-192-169-140-70 263-137-148-263-1
Lat. Exp. 42-39-95-82-55 77-80-81-80-87
% Shear 30-100-90-80-30 100-70-80-100-60

Tensile Specimen .252"
Impact Specimen .394" x .394"

Quality Systems No. N-1224
Expiration Date: September 8, 1981

The undersigned certifies that the contents of this report are correct and accurate and that all operations performed by the undersigned or sub contractors are in compliance with requirements of the material specification and ASME Boiler and Pressure Vessel Code Section III Division I Subsection NCA-3800

ALLOY RODS DIVISION
Chemetron Corporation

BY.....
J. L. Starner

Carbon	.04
Manganese	.99
Chromium	.04
Nickel	.03
Silicon	.39
Columbium+	
Tantalum	.01
Molybdenum	
Tungsten	
Copper	.02
Titanium	
Phosphorus	.010
Sulphur	.014
Vanadium	.01
Cobalt	

Ferrite:

Filletts: OK Vertical & Overhead

State of Pennsylvania }
County of York } SS

Subscribed and sworn to before me
this 15th day of January, 1981

SEAL.....
Notary Public

My Commission expires: 11/22/82



1-20-81

ADDRESS ALL CORRESPONDENCE TO

HENRY J. KAISER, COMPANY
PROCUREMENT DEPARTMENTP. O. BOX 201
MOSCOW, OHIO 45153**HENRY J. KAISER
COMPANY**

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light CompanyPURCHASE
ORDER NO. 7070-40318

SHEET 1 OF 2 SHEET

THIS ORDER NUMBER MUST APPEAR ON
ALL INVOICES, PACKAGES, PACKING
SLIPS, BILLS OF LADING, ETC.

Date: 1/14/81

SELLER

Alloy Rods/Chematron
P.O. Box 517
Hanover, Pa. 17331Attention: Dottì Arigo
Phone: (800) 233-7070

Ship To:

Henry J. Kaiser Company
Kaiser Receiving Warehouse
U.S. Route 52
Moscow, Ohio 45153

Ship Via:

THIS PURCHASE ORDER IS ISSUED TO SELLER SUBJECT TO ALL CONDITIONS AND INSTRUCTIONS SET FORTH HEREIN AND TO THE CONTENTS OF THE FOLLOWING
EXHIBITS ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF:EXHIBIT "A" - SPECIFICATION NO.
EXHIBIT "B" - TERMS AND CONDITIONS
EXHIBIT "C" - SHIPPING INSTRUCTIONS

WORK ORDER NO. 57300

ITEM NO.

SHIP DATE: 3/4/81

TERMS OF PAYMENT: Net

PRICE POLICY:

POINT OF ORIGIN:

F.O.B. POINT: Shipping Pt.

WEIGHT:

CUBE:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL	ACCOUNT NO.
			Welding "Essential Nuclear Material"			
1.	10,000 1,550	Lbs.	#E7018-3/32" coated welding electrode in accordance with ASME Code SFA 5.1 (per attached sheet) with full Nuclear Certification and packaged in 50# hermetically sealed cans	\$.662	\$ 6620.00	7811.9834.31
2.	10,000 2,200	Lbs.	#E7018-1/8" coated welding electrode in accordance with ASME Code SFA 5.1 (per attached sheet) with full Nuclear Certification and packaged in 50# hermetically sealed cans.	.444	4440.00	
3.	1	Lot	Test Charges (\$.02 per pound, and \$30.00 each diameter)	L.S.	460.00	
CONFIRMING DO NOT DUPLICATE Packaging is Min. to be included W/ Each Shipment SALES OR USE TAX EXEMPTION				All goods furnished under this order shall fully comply with all applicable health and safety laws, rules, and regulations including without limitation the Occupational Safety and Health Act of 1970 and the rules and regulations issued pursuant thereto.		
PRICES SPECIFIED IN THIS PURCHASE ORDER INCLUDE ALL PRESENT, FUTURE, FEDERAL, LOCAL, STATE, AND TRANSPORTATION TAXES AND ALL OTHER TAXES PERTAINING TO THE TRANSACTION, EXCEPT THE UNUSUAL SALES AND USE TAX WHICH WILL BE ACCOUNTED FOR BY PURCHASER UNDER ITS DIRECT PAYMENT PERMITS. PERMITS ISSUED TO THE CINCINNATI GAS & ELECTRIC COMPANY; 98000343 ISSUED TO COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY; AND 98000408 ISSUED TO THE DAYTON POWER AND LIGHT COMPANY.				TOTAL OF ORDER	\$ 11,520.00	

INVOICE PURCHASER

AND MAIL Five (5) COPIES WITH

ORIGINAL BILL OF LADING TO:

Henry J. Kaiser, Company
P.O. Box 201
Moscow, Ohio 45153

PURCHASER

HENRY J. KAISER, COMPANY

Agent For:

The Cincinnati Gas & Electric Company
Columbus & Southern Ohio Electric Company
and The Dayton Power and Light Company

AUTHORIZED SIGNATORY

38183, 36189, 38267,
32268PROJECT
ENGINEER W. Puckett

KC:lc

1/14/81

JMC

Materials or services supplied on this purchase order
shall comply with provisions of NRC Regulation 10 CFR
Part 21, Certification and Reporting of Defects and
Failures

(See Note Below:)

Page 2 of 2

Vendor ALLOY RODS/CHEMETRON

KEL P.O. 7070-40318

Address P.O. Box 517

Requested by

Hanover, Pa. 17331

The following as checked require actual (not typical) notarized certification traceable to heat number, to the requirements of the ASME Code Section III and II-C.

SFA 5.1 Mild Steel-Electrodes	SFA 5.5 Low Alloy Steel Electrodes	SFA 5.4 Stainless Steel Electrodes	SFA
1. Weld Dep. Chem. ☒	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐	1. Weld Dep. Chem. ☐
2. All Weld Metal Tensile-as welded ☒	2. All Weld Metal Tensile-as welded ☐	2. Weld Dep. Ferrite ☐	2. All Weld Metal Tensile-as welded ☐
3. All Weld Metal Tensile-stress relief ☒	3. All Weld Metal Tensile-stress relief ☐	3. Test SA X-Ray ☐	3. All Weld Metal Tensile-stress relief ☐
4. All Weld Metal Impact-as welded ☒	4. All Weld Metal Impact-as welded ☐	4. Mill Test ☐	4. All Weld Metal Impact-as welded ☐
5. All Weld Metal Impact-stress relief ☒	5. All Weld Metal Impact-stress relief ☐	SFA 5.9 Stainless Steel Bare Wire	
6. Test X-Ray ☒	6. Test X-Ray ☐	1. Weld Dep. Chem. ☐	5. All Weld Metal Impact-stress relief ☐
7. Mill Test Reports ☒	7. Mill Test Reports ☐	2. Weld Dep. Ferrite ☐	6. Test X-Ray ☐
		3. Mill Test Report ☐	7. Mill Test Report ☐
		4. 10# Tube ☐	8. 10# Tube ☐
		5. Tagged Both ends ☐	9. Tagged both ends ☐

NOTES:

1. All SFA 5.1 & 5.5 material stress relieved per ASME Code Section III para. NB2h31.2b - 8 hrs. @ required temperature.
2. All SFA 5.9 material ferrite content to be 5 to 15% - as calculated by Schaffler Diagram.
3. All filler material to be purchased from qualified supplier.

Reviewed and Checked by W. O. Puckett - 12-18-80
W. O. Puckett - CHIEF WELDING ENG.

14 HCG, 10%

14.W.C.D. 105

Date December 13, 1980
Material Welding electrodes

To be used for						Coded by	Bid No.	Bid No.	Bid No.	
Welding							Chenation	Murex	Werko	
								Ivar Steen		
Attention Janet Tumbleson										
Item No.	Quantity	Unit	Description Give Complete Data-Drawing Number, Etc.	Account Number	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1	5,000	lbs.	#E7018 - 3/32" Coated welding electrode in accordance with ASME Code SFA 5.1 with full nuclear certification and packaged in 10% hermetically sealed cans. Test Charge Chenation worth \$3540.00	7811983431	66¢	330.00	.950	4750.00	11.2¢	3690.00
					Basic on buying contract 20,000 units at 15¢	100.00				
					Total	3410.00	4750.00	3690.00		
Item No.	Purchase Order or Sub Contract Recommend To Be Placed With	P. O. No.	F. O. B.	Terms	Shipping	Shipping Point	Price Policy			
				Quality Assurance Requirement		Reason Supplier Selected		Prepared By _____		
				Byes, see reverse side of requisition		☐ Lowest Price		Purchasing Agent _____		
				QAW 113		☐ Required Design		APPROVED:		
				☐ No Q.A. Requirement		☐ Only Source Known		Procurement Mgr. _____		
				JAN 12-22-80		☐ Early Delivery		Administrative Mgr. _____		
				HUKCO QA Manager		☐ Conformance to Q. A. Requirement		Project Mgr. _____		
						Remarks _____		Owner _____		

HENRY J. KAISER COMPANY

Moscow, Ohio

MATERIAL RECEIVED REPORT

M.R. NO.: 6603

PAGE 1 OF 1

P. O. NO.: 7070 - 40318

REQ. NO.: 7070-38188, 38189
38268

THIS ORDER IS:

 COMPLETE ☐
 NOT COMPLETE ☒
 REC. DAMAGED ☐

DAMAGE REPORT NO. N/A DATE RECEIVED: 1-20-81

ORDERED FROM: ALLOY RODS DIVISION

HANOVER, PA

SHIPPED BY: SAME

SHIPPED TO: JOBSITE PACKING SLIP NO.:

VIA: BUDIG F.O.B. POINT: S.P.

CARRIER		BUDIG
FREIGHT BILL		NO. 13245
EXPRESS BILL		WGT. 3923
PARCEL POST		DATE
PREPAID	☒	AMT. \$
COLLECT	☐	AMT. \$
RAIL LINE		
CAR NO.		
DOCK NO.		

P.O. ITEM NO.	QUANTITY	UNIT	DESCRIPTION	LOCATION	ACCOUNT N
			WELDING		
			"ESSENTIAL NUCLEAR MATERIAL"		
1	1550	LBS.	#E7018- $\frac{3}{32}$ " COATED WELDING ELECT	Whe #1	7811.9834.
			RODE, ATOM ARC 7018 HT# 42140131		
			Lot # 25029Q		
2	2200	LBS.	#E7018- $\frac{1}{8}$ " COATED WELDING ELECT		
			RODE, ATOM ARC 7018		
			HT # 4214771		
			Lot # 1K010721		

DWG. NO. _____

S.M. D. _____

REQ. ORIGINATOR W. PUCKETT

INSPECTED TO
KEI. 074W 113
DATE 1-23-81 STAMP

QUALITY ASSURANCE INSPECTOR

 MJB 1-21-81
 CHECKED BY
 ASST. WARE. SUPT.
 WAZ
 WAREHOUSE SUPT.

KAISER ENGINEERS, INC.		SPECIAL PROCESS PROCEDURE MANUAL	
W4. H. ZIMMER NUCLEAR POWER STATION			
TITLE: WELDING FILLER MATERIALS CONTROL PROCEDURE		SPPM No. 3.3, E.7	Page: 2 of 7
Prepared By: W. O. Puckett		Effective Date: March 11, 1980	
Approved By:			
KEI QA Manager	<i>[Signature]</i> 1/30/80	Materials & Fabrication Technical Services	<i>[Signature]</i> 2/27/80
KEI Construction Manager	<i>[Signature]</i>	Weld/NDE QA Engineer	<i>[Signature]</i> 1/30/80

Purpose: The purpose of this procedure specification is to define the KEI/Program for control of the purchase and issuance of welding filler materials used for fabrication and installation of nuclear piping, other components and appurtenances.

General:

1.0 Welding filler materials considered in this specification are as follows:

- 1.1 Covered electrodes
- 1.2 Bare rods and wire
- 1.3 Consumable insert rings
- 1.4 Flux cored electrodes
- 1.5 Submerged arc flux
- 1.6 Backing rings

2.0 All welding filler materials used at the site will be received in accordance with the procedure specified herein.

Procedure:

1.0 Requisitioning Materials

1.1 Responsibility - It shall be the Senior Construction Welding Engineer's responsibility to initiate purchase requisitions for all welding filler materials.

1.2 The Senior Construction Welding Engineer will develop appropriate material ordering information to appear on the purchase requisition form. This information must satisfy the requirements of ASME, Section III or applicable Code, the project specifications and the current rev. to SPP 3.3, ~~Rev~~. It is a requirement that the information appears on both the requisition and the QA reviewed and approved purchase order. The requisition and purchase order forms shall contain the items listed below as a minimum:

- 1.2.1 Nuclear (ASME Section III) or non-nuclear application
- 1.2.2 ASME-SFA (or AWS if identical) Specification Number and type or classification
- 1.2.3 Size
- 1.2.4 Quantity
- 1.2.5 Testing requirements including chemical analysis, tensile tests, Charpy V-notch impact properties and testing temperature. Tensile and impact tests shall be performed, when required, using specimens from coupons in the as-welded and also in the postweld heat treated condition. The time at specified postweld heat treatment temperature shall be 3 hours, unless otherwise specified.

WELDING FILLER MATERIALS CONTROL PROCEDURE

Page 2 of 7

- 1.2.6 Test reports needed and type of information required. (See Exhibit A.)
- 1.2.7 Ferrite requirements for austenitic stainless steel filler materials, (Ref. SPPM 3.4)
- 1.2.8 Packaging requirements
- 1.2.9 Marking requirements
- 1.2.10 Additional special requirements

Any other additional pertinent data or requirements must be added where applicable. A typical purchase order for filler metal is shown in Exhibit A.

Check out

1.3
1.4
1.5

It is mandatory that low hydrogen-type electrodes be purchased and received in sealed moisture-proof containers. Other electrodes and filler materials shall be properly packaged to assure adequate protection during transit and storage.

A requirement shall be noted on the purchase requisition and purchase order that certified materials test reports which contain actual test results, shall be furnished by the welding filler material manufacturer, supplier or laboratory conducting the tests. Standard Certificates of Compliance are not acceptable.

Identification of all welding materials shall be in accordance with the following ASME Code, Section III requirement: "Welding materials shall be clearly identified by legible marking on the package or container to ensure positive identification of the material. The marking shall include: heat and lot number, a control marking code which identifies the materials with the Certified Materials Test Report and other information such as specification, grade and classification number, supplier's name and trade designation."

Filler materials for which all required documentation has been received and accepted shall be considered certified.

2.0 Receiving Requirements

*verify
required
paper on file*

- 2.1 The KHI Welding and NDE Quality Assurance Engineer or his designee shall check the receiving documents to assure that purchase requisition requirements have been met and that the manufacturer has provided the proper certification including actual test results. Typical certification data is unacceptable. He shall make arrangements to have weld metal tests made as required, which include mechanical properties and impact tests and chemical analysis, for each heat or lot of material received.
- 2.2 All weld filler material received shall be stored in a Receiving Hold Storage Area until confirmation of all requirements. Upon confirmation the filler material will be released to central stores for issuance.
- 2.3 Each electrode container shall be inspected for evidence of damage. Particular attention shall be paid to containers of low hydrogen type electrodes.

- 2.4 Any damaged containers shall be so identified and held aside in a segregated storage area. If a container of covered electrodes is broken, these electrodes shall not be used. If the container is damaged but unbroken, then the Senior Construction Welding Engineer or his designee is required to confirm that electrodes have not been damaged and are acceptable for use. Any covered electrodes with chipped or broken coatings shall not be used.

3.0 Central Storage

- 3.1 The following are general instructions. They will be supplemented by specific instructions, as required, by the Senior Construction Welding Engineer.
- 3.2 All welding materials shall be tagged and stored in an enclosed clean, dry storage area such as the "rod" shack.
- 3.3 Consumable insert and backing rings shall be clearly identified by a tag attached to each ring or by stamping or indelible marking.
- 3.4 The storage area shall be enclosed and have limited access. Only those personnel designated by the Construction Superintendent shall have access to this area. The stockroom/warehouse personnel shall transfer welding filler material to the "rod" shack or a satellite storage room as required after receiving inspector acceptance.

3.5 Storage of Welding Filler Materials.

- 3.5.1 Bare welding rods, consumable insert rings and backing rings shall be stored separately by ASME/AWS classification and size. No heated storage is required.
- 3.5.2 Unopened containers of covered electrodes shall be clearly identified and stored segregated by ASME/AWS classification.
- 3.5.3 Opened containers of covered electrodes shall be clearly identified and stored separately as follows:
- 3.5.3.1 Cellulosic electrodes such as ASME/AWS classification EXX10 shall be stored in clean dry storage areas and do not have to be placed in heated electrode holding ovens. They shall be stored separately by heat and identical lot numbers.
- 3.5.3.2 Low hydrogen electrodes, such as ASME/AWS classification EXX15 and stainless steel classification E308, shall be stored in vented electrode holding ovens at temperatures between 175°F to 400°F. Each holding oven shall contain only one single classification of electrodes segregated by heat or lot number. Individual holding ovens shall be clearly marked to indicate the classification of electrode stored within.

3.5.4 Low Hydrogen Covered Electrodes

All Low Hydrogen covered electrodes must be dry if they are to perform properly. The following procedure shall be strictly adhered to when low hydrogen covered electrodes are used.

3.5.4.1. Remove covered electrodes from the intact, sealed containers and place in heated vented electrode holding ovens (See 3.5.3.2.) or vented "rod" warmers in the central storage area or a Satellite Storage Room for a minimum of one hour at 175°F to 400°F before using.

3.5.4.2. When covered electrodes are removed from a holding oven to be issued to welders they shall be placed in a portable "rod" warmer. Only one classification and heat or lot of electrodes shall be stored in each individual portable "rod" warmer. Each portable "rod" warmer shall be uniquely marked for identification purposes and shall be checked on a monthly basis to assure that each "rod" warmer maintains a correct temperature between 175°F and 400°F.

A list of acceptable rod warmers shall be maintained in the rod shack and shall show the date of last temperature check. No rod warmer shall be issued without first verifying it is on the current acceptable list. All rod warmers which are out of service because of overdue checks, damage, contamination, etc., shall be tagged out of use and the reason identified on the tag. Out of service rod warmers shall be segregated in a clearly marked area.

3.5.4.3. All covered electrodes exposed to ambient conditions for more than 4 hours without coming in direct contact with water shall be returned to central storage for rebaking. They shall be segregated according to heat and/or lot number and spread out in the furnace in such a manner so as to assure that each electrode reaches the drying temperature. The rebake cycle shall be recorded on a temperature chart.

3.5.4.4. The proper rebake temperature depends on the type and condition of covered electrode. The following classifications of electrodes that have been exposed but have not come in contact with water shall be rebaked for one hour at the listed temperature. All weld rod rebaking shall be conducted under the supervision of the Senior Construction Welding Engineer or his designee.

<u>Electrode</u>	<u>Rebake Temperature</u>
E 7018	700°F
E 9018	750°F
E 11018	750°F
Austenitic SS	500°F

After rebaking if the electrode coating is cracked or flaking the covered electrode shall be destroyed.

3.5.4.5. Acceptable rebaked electrodes shall be stored in the holding ovens ~~or portable heaters for reissue.~~

3.5.4.6. Covered low hydrogen electrodes that have come in direct contact with water or have been exposed to extremely humid conditions shall not be used or rebaked and shall be destroyed.

4.0 Local Storage Areas

4.1 Local or satellite storage areas shall be set up in order to provide easy access to weldors. All electrode handling within these local areas shall fully conform to the requirements set forth in the preceding sections covering central storage.

5.0 Electrode Identification

5.1 The material identification coding shall appear on all electrodes which are released for use as "certified." Electrodes shall not be dispensed to welding personnel without the identifying coding being affixed.

6.0 Issuing Filler Materials

6.1 It will be the responsibility of the Senior Construction Welding Engineer to designate the proper filler materials on the KBI Weld 1 form.

6.2 The Craft Supervisor will complete and approve a KBI Weld 2 form (Ref. SPPM 8.0, Appendix C,) using the KBI Weld 1 Form information. The purpose of the KBI Weld 2 form is to provide for control of the released welding filler materials to assure that only the specified filler metal is used in any particular weld. An original and 5 copies shall be filled out. (Reference Exhibit C.)

6.3 The individual weldor will use the KEI Weld 2 form to withdraw from storage sufficient filler material for his immediate work. Individual weldors shall, at any time, have only the correct type and classification of filler materials specified in the procedure to which they are working. When more than one filler material is required by the procedure, then separate holding containers or portable "rod" warmers must be used.

rule
6.4 The Weld Rod Clerk shall issue all filler material on a weight basis. He shall record on the KEI Weld 2 form the weight of all bare rod and covered electrodes issued.

He shall also record on the KEI Weld 2 form the heat number and/or lot number for bare rods, consumable inserts and backing rings, and the heat number and lot number for covered electrodes prior to use.

6.5 A copy of the KEI Weld 2 form shall be placed in the traveling plastic folder assigned to the component being welded and a copy will be attached to the portable "rod" warmer and the remaining copies shall be retained by the "rod" storage custodian.

6.6 Craft supervisors will be responsible for assuring that portable "rod" warmers are properly used and that correct temperatures are maintained. The Senior Construction Welding Engineer will have overall responsibility for correctness of conditions in central storage, local heated holding ovens and portable "rod" warmer units.

6.7 It shall be the weldors responsibility to assure that the portable "rod" warmers are plugged in at all times (except for one (1) hour allowed during transport to and from "rod" shack.) Random field checks will be carried out by the Senior Construction Welding Engineer or his designee to assure implementation of this requirement.

6.8 Covered electrodes that have been removed from a heated holding oven or portable "rod" warmer and exposed to the ambient temperature for more than four (4) hours without direct contact with water shall not be used but shall be accumulated, returned to central storage and baked before reissue. (See 3.5.4.4.)

Any weldor making a weld and using electrode directly from his stub bucket shall not have more than five (5) sticks of covered electrode in his stub bucket at any one given time, and these electrodes are not to be exposed to ambient temperature for more than four (4) hours, (under enclosed conditions, inside.) Anytime welding is being done, outside, the humidity should be taken into consideration and under no circumstances should covered electrode be exposed to rain, so in this case, covered electrode should not be exposed to ambient temperature for more than two (2) hours.

- 6.9 Damaged and discarded welding materials, stub ends, etc., must be cleared from work areas. A weld rod stub bucket will be issued to each weldor. The weldor is to put his weld rod stubs in his stub bucket and return the weld rod stubs and the stub bucket at the end of the shift to the weld rod shack personnel. Weld rod shack personnel shall receive weld rod stubs and stub buckets and shall dump stubs into appropriate container located outside weld rod shack.

7.0 Return of Filler Materials

- 7.1 The Craft Supervisor will be responsible to assure that all weldors will return all unused wire and electrodes to the appropriate storage area at the end of each shift. Low hydrogen type electrodes shall be returned to the correct holding or rebake oven or shall remain in the portable rod warmer.
- 7.2 It shall be the responsibility of duly assigned personnel to record the applicable heat and lot numbers for all bare rod as well as covered electrodes returned to the "rod" shack and/or satellite storage in portable "rod" warmers. Covered electrodes added to these "rod" warmers shall be of the same heat and lot number.
- 7.3 The Weld Rod Clerk shall weigh all bare rod and covered electrodes returned to Central Storage and record the weight on the KEI Weld 2 form. A new KEI Weld 2 form will be made out for each new issue of electrodes to and for each weldor.

8.0 Documentation

- 8.1 The KEI Welding and NDE Quality Assurance Engineer shall be responsible for completion of the KEI Weld 1 forms.
- 8.2 The KEI Welding and NDE Quality Assurance Engineer shall review and accept or reject all certified materials test reports covering welding filler materials.
- 8.3 The KEI Welding and NDE Quality Assurance Engineer shall assure that all pertinent documents covering welding operations are properly filled and in current condition at the Site Documentation Center.

STANDARD TEST PROCEDURE - HEAD SHEET

YES

NO

a. Dates Established

☐☐

b. Package numbered

☒☐

c. Test Conducted

☒☐

A. TEST PARAMETERS - SHEET 1

Items filled in correctly

1. Systems & Class

☒☐

2. Location of Test

☒☐

3. Elevation of Terminal Pts

☒☐

4. Attached Drawings

☒☐

5. Pip Fabricator Noted

☒☐

6. Type Test Matches A.8

☒☐

7. Test Media

☒☐

8. Test Plan (only one) and Revision Number Noted

☒☐

9. a.1. As per S&L

☒☐

a.2. As per CGSE

☒☐

9b. Maximum Pressure

☒☐

9c. Amount of Head Pressure

☒☐

9d. Gauge Location & Elev Correct

☒☐

9e. Initial Test Pressure Correct

☒☐

9f. Holding Test Pressure Correct

☒☐

10. Test Parameters

Completed by: signed and dated correctly

☒☐

Verified by: signed and dated correctly

☒☐

Check list completed and reviewed by

J. Hill

Date 1/2/80

THIS COPY ISSUED FOR
INFORMATION ONLY
NOT TO BE USED FOR
PHYSICAL CONSTRUCTION

B. 1. Valve Line up Signed and Dated	☒	☐
2. Water Analysis Report Signed and Dated	☐	☐
C. 1. Test Gages Listed	☐	☐
Ranges Acceptable	☒	☐
Calibration Dates Acceptable	☒	☐
C. 1. Temperatures Filled In	☒	☐
2. Time Test Started: Completed	☒	☐
Time Test Reached: Completed	☒	☐
Hold Time Correct	☒	☐
3. Test Results: Completed	☒	☐
D. 1. KEI Supv./or Engineer Signed and Dated	☒	☐
2. Q.A. Representative Signed and Dated	☒	☐
3. CG&E Representative Signed and Dated	☒	☐
4. A.N.I.: Signed and Dated	☒	☐
E. Remove Test Tags, Remove Test Equipment etc. Signed and Dated	☒	☐
F. Hydrostatic Test Valve Line up All Items Complete and Match P.I.D. Boundaries	☒	☐
G. PSK or ISKs Marked with Boundaries and Valves Match Valve List	☒	☐

Check list completed and reviewed by

G. J. Hall

Date 12/3/80