M3242
7

HOUSTON LIGHTING AND POWER COMPANY
SOUTH TEXAS PROJECT
ELECTRIC GENERATING STATION
PLANT PROCEDURES MANUAL

DEPARTMENT PROCEDURE

SAFETY-RELATED (Q)

General Valve Repacking

OPMP04-ZG-0003
Rev. 9
Page 1 of 19

APPROVED: _____ 3/26/92 4/2/92
MAINTENANCE MANAGER DATE APPROVED DATE EFFECTIVE

1.0 Purpose and Scope

1.1 This procedure provides instructions for general valve repacking only. Valves containing Alternative or Live-Load packing shall be repacked in accordance with OPMP02-ZG-0011, (Alternative Valve Packing and Live-Load Valve Packing).

1.2 This procedure need not be performed sequentially, except for subsection 5.9 (Repacking a Valve Under Pressure). When performed, steps listed under subsection 5.9 shall be performed sequentially.

1.2.1 Steps of this procedure may be performed concurrently at the discretion of the Foreman.

1.2.2 This procedure may be used for troubleshooting and maintenance activities if specific instructions identifying the steps to be performed are controlled by a service request in accordance with OPGP03-ZA-0090, (Work Process Program).

1.3 This procedure satisfies Significant Operating Experience Report (SOER) 83-009. Commitment regarding replacement of valve packing in safety related valves.

1.4 This procedure satisfies Management Action Tracking System (MATS) item number 8701026-869 regarding unacceptable alterations to soft compression packing.

1.5 This procedure is not intended to supersede [illegible] repacking instructions.

STP
CONTROLLED COPY
APR 0 2 1992
900
DOCUMENT CONTROL

2.0 Definitions

2.1 None

3.0 Prerequisites

NOTE

The word (Record) indicates a data entry on Form (-1) of this procedure.

Record 3.1 Foreman shall mark sections to be performed or enter N/A on Form (-1).

Record 3.2 Record M&TE data on Form (-1) at time of initial use.

3.3 If valve contains Live-Load packing, refer to OPMP02-ZG-0011, (Alternative Valve Packing and Live-Load Packing).

3.4 Verify availability of the following and obtain as needed:

3.4.1 Packing tools

3.4.2 Thread lubricant

3.4.3 Wipes

3.4.4 Cleaning fluid

3.4.5 Appropriate size and type of packing

3.4.5.1 To be determined by approved vendor drawings, or

3.4.5.2 By measurement

3.4.5.3 By SR

3.4.6 Containers for parts and fasteners

3.4.7 Packing die and mandrel

3.4.8 Approved cleaning fluid(s) and wipes,refer to OPGP03-ZM-0006, (Control of System Cleanness During Maintenance) and the STPEGS Expendable Materials Manual.

3.5 To ensure accountability and traceability of parts during maintenance, parts should be placed in labeled or marked containers at time of disassembly. If no containers are available or parts are too large for containers, parts MUST be labeled or tagged.

3.6 Verify and sign onto equipment clearance order and obtain work start approval.

3.7 Obtain a Radiation Work Permit (RWP) when the use of this procedure is required in a Radiologically Restricted Area (RRA).

3.8 Obtain a Section XI Repair and Replacement Traveler if work is being performed on A.S.M.E. code components.

3.9 Verify the following:

3.9.1 Procedure revision number is correct.

3.9.2 All Field Changes (FC's), if any, have been incorporated.

4.0 Precautions

4.1 Use of ordinary combustibles shall be in accordance with OPGP03-ZF-0004, (Control of Transient Fire Loads).

4.2 Use of flammable liquids and gases shall be in accordance with OPGP03-ZF-0005, (Use of Flammable Liquids and Gases).

4.3 Use and disposal of expendable materials, such as chemical and hazardous materials, shall be in accordance with STPEGS Expendable Materials Manual.

4.4 For disposal of those items not covered by the STPEGS Expendable Materials Manual, refer to OPGP03-ZH-0003, (Packaging of Hazardous/Nonhazardous Waste Materials for Disposal).

4.5 Personnel shall follow radiological precautions outlined on RWP.

4.6 Personnel shall follow precautions outlined in OPGP03-ZI-0006, (Asbestos Abatement Program).

4.7 Approved/acceptable cleaning fluids and/or methods shall be determined in accordance with the following:

4.7.1 OPGP03-ZM-0006, (Control of System Cleanness During Maintenance).

4.7.2 STPEGS Expendable Materials Manual.

4.8 Approved/acceptable marking methods and/or devices shall be determined in accordance with the following:

4.8.1 OPGP03-ZM-0013, (Control of Stainless Steel).

4.8.2 OPGP03-ZI-0008, (Control of Expendable Materials).

CAUTION

To prevent excessive personnel radiation exposure, personnel shall not handle, transport or come in contact with any foreign material during the performance of this procedure without first contacting Health Physics personnel for radiological evaluation. SER 89-021

5.0 Procedure

NOTE

If valve(s) contains Alternative or Live-Load packing, do not use this procedure. Refer to OPMP02-ZG-0011, (Alternative Valve Packing and Live-Load Valve Packing).

Record 5.1 Record SR/PM number.

Record 5.2 Record Unit number.

Record 5.3 Record valve tag number.

CAUTION

To prevent loss of packing lubricant, ensure stretching, hammering or unacceptable alteration of soft compression packing is NOT performed during valve repacking.

5.4 Determine size of packing required and amount.

5.5 Determine appropriate type of packing to be used.

5.6 Packing removal:

****
* *
* CAUTION *
* *
* Fasteners should be loosened carefully, so *
* that any trapped pressure may be expelled. *
* *
****

5.6.1 Remove packing gland fasteners and raise gland out of bore.

****
* *
* CAUTION *
* *
* Take care not to damage stem or packing *
* bore. *
* *
****

NOTE

In an emergency or ALARA consideration, when lantern ring is severely seized in bore, it is permissible to install new packing above lantern ring only.

5.6.2 Remove packing.

Record MVP

5.6.3 Notify Foreman if lantern ring is severely seized in bore during an emergency or ALARA consideration, for further instructions.

5.7 Cleaning and Inspection:

5.7.1 Clean packing bore and stem.

5.7.2 Inspect packing bore for corrosion, scratches or other damage which would prevent a proper seal.

5.7.3 Clean and inspect stem, lantern ring, gland fasteners and gland for scratches, corrosion or other damage which would prevent a proper seal.

5.7.3.1 Report any abnormal conditions to Work Supervisor before proceeding.

5.8 Valve packing:

5.8.1 Braided types of packing:

5.8.1.1 Insert lower ring, observing location of split.

5.8.1.2 Fill bore to level of lantern ring, if applicable, or to top of stuffing box taking care to alternate splits as defined in substep 5.8.2.9, unless otherwise specified.

NOTE

Enough room must be left in packing box to allow gland to extend into bore at least 1/8 inch.

5.8.1.3 Insert gland into bore.

5.8.1.4 Install gland fasteners, finger tight.

* *
*
* CAUTION *
*
* Do not allow gland to become cocked during *
* tightening. *
*
* *

5.8.1.5 Tighten packing gland fasteners evenly to avoid cocking gland.

Record

5.8.1.6 Record type, size and number of rings installed.

5.8.2 Graphite and carbon ribbon packing:
(Preformed outside stuffing box)

NOTE

To preform graphite or carbon ribbon packing into rings, a die and mandrel should be used.

5.8.2.1 Locate proper sized die and mandrel set, or request that the proper set be machined.

5.8.2.2 Select size and length of ribbon for size packing rings you wish to fabricate. Use Addenda 1 and 2 to aid in selection.

5.8.2.3 Wrap appropriate length of ribbon around mandrel, place it in die, and compress together.

5.8.2.4 Remove mandrel, and packing ring from die.

5.8.2.5 Repeat substeps 5.8.2.3 and 5.8.2.4 until enough packing rings have been fabricated.

5.8.2.6 Using a sharp tool, split each ring so that a twisting of the ring can facilitate installation.

5.8.2.7 If packing is not to be immediately installed, packing should be bagged and labeled as to type and size.

NOTE (1)

- Graphite ribbon packing shall be used with graphite filament junk ring.
- Carbon ribbon packing shall be used with braided carbon junk ring.

NOTE (2)

If a lantern ring is used, install junk rings immediately above and below lantern ring, (refer to Addendum 3).

NOTE (3)

Packing shall be twisted, instead of pulled open for installation.

5.8.2.8 Install bottom packing ring (junk ring).

5.8.2.9 Install preformed rings of packing into bore, by offsetting splits as follows:

a. If two rings of packing are used, offset splits at 180° intervals.

b. If three rings of packing are used, offset splits at 120° intervals.

c. If four or more rings of packing are used, offset splits at 90° intervals.

NOTE

If a lantern ring is used, offset splits in relation to the number of rings below lantern ring and above lantern ring.

5.8.2.10 Install remaining rings of packing into bore.

NOTE

Leave enough room for a junk ring at top of bore and also room for gland to extend at least 1/8 inch into bore.

5.8.2.11 Install upper junk ring.

5.8.2.12 Lower gland to packing and install fasteners finger tight.

5.8.2.13 Tighten packing gland fasteners evenly to avoid cocking gland.

Record

5.8.2.14 Record type, size and number of rings installed.

5.8.3 Graphite and carbon ribbon packing:
(Formed inside stuffing box)

NOTE

An alternate method not generally recommended to form graphite or carbon packing rings is to use ribbon wrapped around stem and compressed into bore, using a split packing mandrel and gland, (refer to Addendum 4).

5.8.3.1 Select size and length of ribbon you need. Use Addenda 1 and 2 to aid in selection.

5.8.3.2 After installing bottom junk ring of appropriate type and size and tamping it to bottom of bore, wrap correct length of ribbon packing around stem and insert it into bore.

5.8.3.3 Using a split packing mandrel and gland, compress ribbon onto junk ring.

NOTE

If a lantern ring is used, install junk rings immediately above and below lantern ring, (refer to Addendum 3).

5.8.3.4 Repeat substeps 5.8.3.2 and 5.8.3.3 until stuffing box is full, minus one ring.

5.8.3.5 Install upper junk ring.

5.8.3.6 Install gland and tighten fasteners, finger tight.

5.8.3.7 Tighten packing gland fasteners evenly to avoid cocking gland.

Record 5.8.3.8 Record type, size and number of rings installed.

* *
* *
* CAUTION *
* *
* Packing a valve under pressure is not *
* advisable; however, it may be performed, *
* by performing subsection 5.9. *
* *
* *

5.9 Repacking valve under pressure:

NOTE

The following substeps 5.9.1 through 5.9.11 shall be performed sequentially while packing a valve under pressure on backseat.

****
*
* CAUTION
*
* Personal protective clothing shall be worn
* when attempting this type of packing. Face
* shield, and gloves are a minimum. Due to
* temperature, pressure, and type of fluid
* in line, personal protective clothing
* must be evaluated prior to starting job.
*
****

5.9.1 Ensure valve has a backseat.

NOTE

The cognizant Foreman shall, and personnel performing task should, accompany operations to valve to verify that it is positioned on backseat.

Record MVP

5.9.2 Request Plant Operations to backseat valve, and verify valve is positioned on backseat.

5.9.3 Visually observe valve for any signs of leakage around packing gland area that would indicate backseat sealing failure.

5.9.3.1 Report any signs of leakage to Work Supervisor before proceeding.

5.9.4 Slowly loosen packing gland fasteners evenly, and visually observe for any signs of movement or leakage coming from around packing. DO NOT REMOVE FASTENERS.

5.9.5 Ensure valve backseat is not leaking, prior to removing packing gland fasteners.

5.9.5.1 Remove packing gland fasteners.

CAUTION

Packing should be removed cautiously, one ring at a time, being observant of any changes during removal that might indicate backseat failure.

5.9.6 Raise gland and remove old packing, or as many rings as is determined necessary.

5.9.7 Install appropriate type and size of packing, using applicable steps listed in subsection 5.8.

5.9.8 Install packing gland fasteners and tighten evenly to avoid cocking gland.

5.9.9 Request Plant Operations to slowly release valve off backseat and observe for any signs of packing leakage.

5.9.10 Retighten gland fasteners, if necessary.

Record 5.9.11 Record type, size and number of rings installed.

6.0 Acceptance Criteria

NOTE

In the event that the valve cannot be fully stroked, a partial stroke will be sufficient to ensure that binding is not present. If you are unable to stroke the valve at all, so note on Form (-1) comment section of this procedure.

6.1 Valve strokes with no binding.

6.2 No packing leakage. If zero leakage is unattainable, note amount of leakage on Form (-1) comment section of this procedure.

7.0 References

7.1 Form No. P-3012, John Crane Packing Installation

7.2 ST-HS-HS-4230, Response to SOER 83-009

7.3 MATS item number 8701026-869 regarding unacceptable alterations of soft compression packing.

7.4 Specification 5L749TS1018, "Alternative Valve Packing and Live Load Design", Rev. 1

8.0 Support Documents

8.1 Addendum 1 - Determining Packing Dimensions

8.2 Addendum 2 - Ribbon Pack Selection

8.3 Addendum 3 - Packing Installation

8.4 Addendum 4 - Forming Ribbon Packing in Stuffing Box

8.5 Data Sheet (-1)

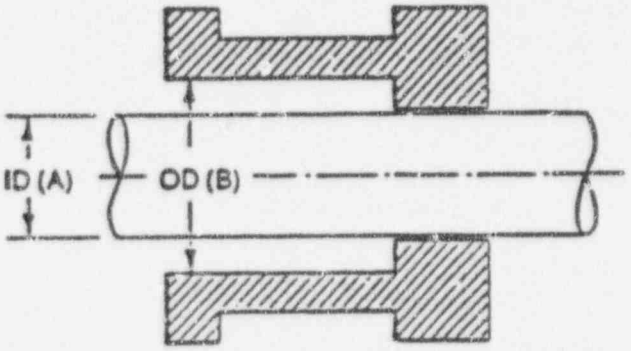
9.0 Documentation

9.1 The following documentation is required to be retained with work package:

9.1.1 Data Sheet OPMP04-ZG-0003-1

ADDENDUM 1
DETERMINING PACKING
DIMENSIONS
(Page 1 of 1)

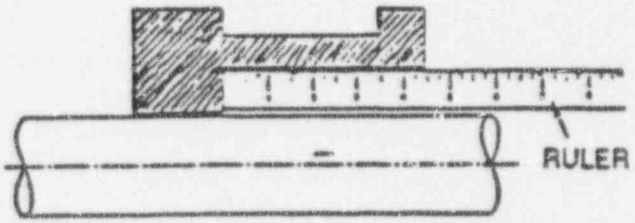
SELECT CORRECT SIZE PACKING
Determine correct cross section:



$\frac{B-A}{2}$ = Cross Section

Method of Figuring Length: (A + Cross Section) X 3.143 = Length

DETERMINE REQUIRED NUMBER OF RINGS
To determine number of rings per stuffing box, measure depth of box.



Divide cross section into depth for correct number of rings.

$\frac{\text{Depth}}{\text{Cross Section}}$ = No. of Rings (Closest Whole Number)

ADDENDUM 2
RIBBON PACK SELECTION
(Page 1 of 2)

RIBBON-PACK Width Selection

Equivalent Square Packing Cross Section	Use This Width Ribbon-Pack
Up to 3/16"	1/4"
3/16" to 5/16"	1/2"
5/16" to 7/16"	3/4"
7/16" and up	1"

ALL-GRAPHITE RIBBON-PACK Wrap Selection

Equivalent Square Packing Cross Section	Number of Wraps
3/16"	6
1/4"	8
5/16"	10
3/8"	12
7/16"	14
1/2"	16
For every 1/6 inch increase in cross section dimension add two wraps.	

CORRUGATED GRAPHITE RIBBON-PACK Wrap Selection Guide

Equivalent Square Packing Cross Section	Number of Wraps
3/16"	7
1/4"	9
5/16"	12
3/8"	15
7/16"	17
1/2"	19
For every 1/6 inch increase in cross section dimension add two wraps.	

ADDENDUM 2
RIBBON PACK SELECTION
(Page 2 of 2)

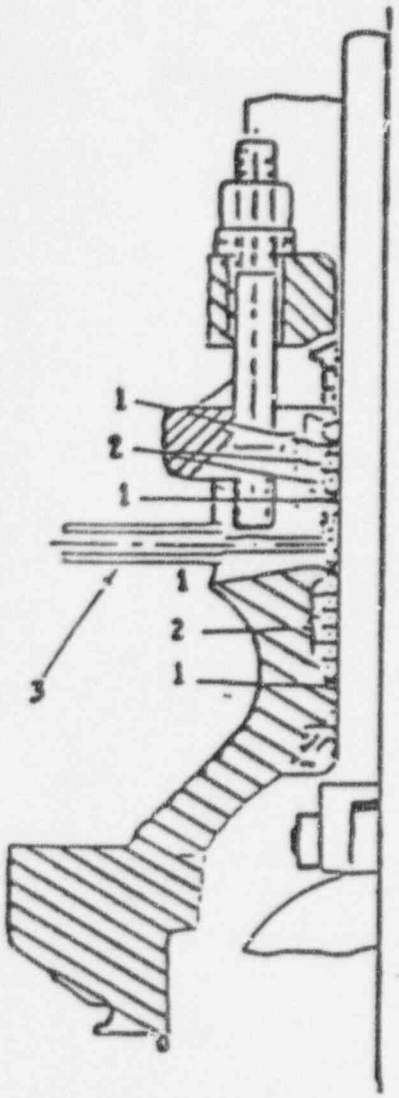
ALL-GRAPHITE RIBBON-PACK: Suggested lengths (inches) per ring

	Stuffing Box Inside Diameter (inches)										
		3/4	1	1-1/4	1-1/2	1-3/4	2	2-1/4	2-1/2	2-3/4	3
	1/4	13	24	38							
	3/8	11	22	36							
STEM	1/2	8	19	33	51						
	5/8	4	16	30	48						
O.D.	3/4		11	26	43	64					
	1			14	32	53	77				
(in.)	1-1/4				18	38	62	90			
	1-1/2					21	45	72	102		
	1-3/4						24	51	82	115	
	2							27	58	91	128

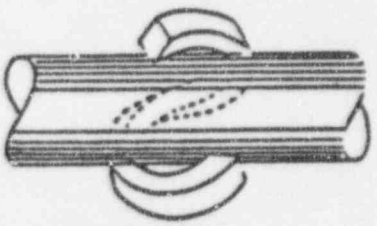
CORRUGATED GRAPHITE RIBBON-PACK: Suggested lengths (inches) per ring

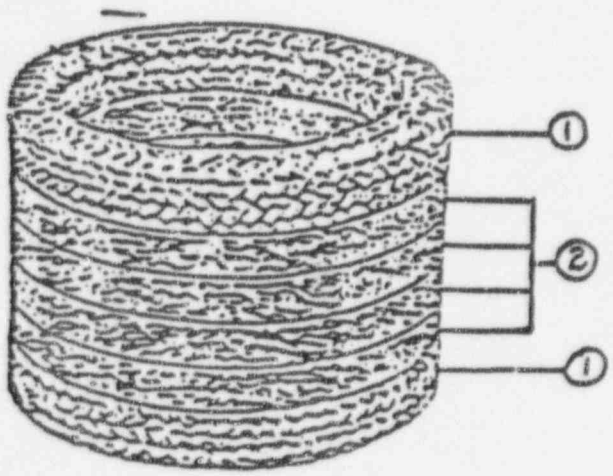
	Stuffing Box Inside Diameter (inches)										
		3/4	1	1-1/4	1-1/2	1-3/4	2	2-1/4	2-1/2	2-3/4	3
	1/4	14	29	45							
	3/8	12	26	43							
STEM	1/2	10	21	41	60						
	5/8	4	18	35	57						
O.D.	3/4		14	28	53	75					
	1			18	35	65	90				
(in.)	1-1/4				22	42	77	105			
	1-1/2					26	50	88	119		
	1-3/4						30	57	88	134	
	2							33	64	112	149

ADDENDUM 3
PACKING INSTALLATION
(Page 1 of 1)



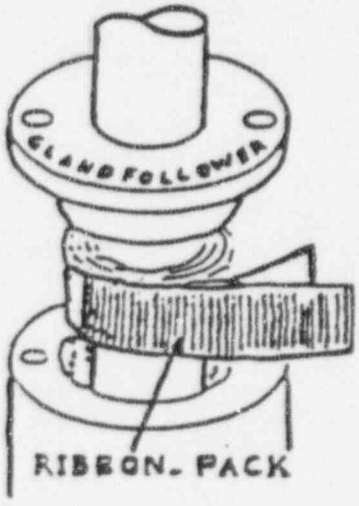
1. Graphite filament or braided carbon packing
2. Preformed ribbon type packing
3. Leak off port for lantern ring



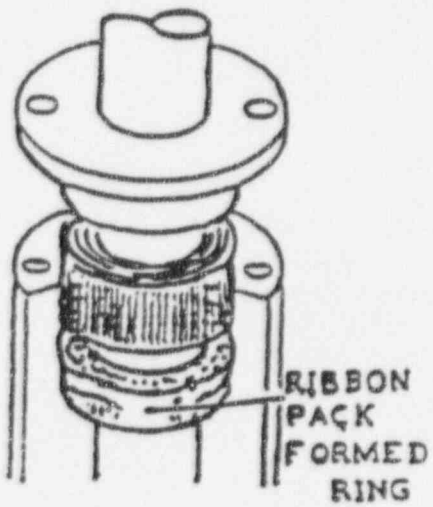


ADDENDUM 4
FORMING RIBBON PACKING
IN STUFFING BOX
(Page 1 of 1)

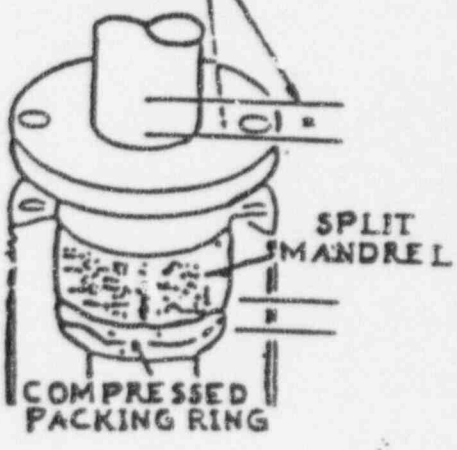
1.



2.



3.



SPLIT MANDREL

DATA SHEET
OPMP04-ZG-0003-1
(Page 1 of 2)

5.1 SR/PM NO. _____

5.2 Unit NO. _____

5.3 Valve TAG NO. _____

3.1

FOREMAN SHALL MARK SECTIONS TO BE PERFORMED OR ENTER N/A			
5.4	Determine Size and Amount of Packing	5.8	Valve Packing
		5.8.2	Repack Valve Using Graphite and Carbon Ribbon Packing
5.5	Determine Type of Packing		
5.6	Packing Removal	5.9	Repacking Valve Under Pressure
5.7	Cleaning and Inspection		

MVP 5.6.3 Notified Foreman for further instructions, lantern ring severely seized in bore.

_____ _____
Foreman Signature Date

3.2

MEASURING AND TEST EQUIPMENT		
DESCRIPTION	STPEGS I.D. NO.	CALIBRATION DUE DATE

5.8.1.6 Type: _____ Size: _____ in. No. of rings installed: _____

5.8.2.14 Type: _____ Size: _____ in. No. of rings installed: _____

5.8.3.8 Type: _____ Size: _____ in. No. of rings installed: _____

MVP 5.9.2 Verified valve is positioned on the backseat.

_____ _____ _____
Foreman Signature Date

5.9.11 Type: _____ Size: _____ in. No. of rings installed: _____

This FORM, when completed, shall be retained for the life of the plant.

DATA SHEET
OPMP04-ZG-0003-1
(Page 2 of 2)

SR/PM NO: _____

COMMENTS: _____

PERFORMED BY: _____ DATE: _____
MECHANIC

REVIEWED BY: _____ DATE: _____
FOREMAN

The * NEW ALT - Packing RFA - # 1852 NEED NCR / SPR/V

OLD RFA →

STP 646A (01/91)

SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

REQUEST FOR ACTION

RFA # 91-1495

PAGE 1 OF ____

1. UNIT 2

2. SYSTEM ZZ

3. NEED DATE 10-4-91

3A. EXPECTED DATE 10-4-91

4. NONCONFORMING CONDITION: YES (NO)

REJECT	REWORK	DESIGN ENGINEERING EVALUATION	
		REPAIR	USE-AS-IS

15. SPR REQUIRED? YES (NO)

13. PRIORITY

MANDATORY CARRY:
- CRITICAL TO CONTINUED OPERATION: YES(PRI 1) NO
  - LCO EXPIRATION TIME/DATE ____
  - WORK DOCUMENT(S) ____
- CRITICAL TO WORK IN PROGRESS: YES(PRI 2) NO
  - WORK DOCUMENT(S) ____
- CRITICAL TO SCHEDULED WORK: (YES(PRI 3)) NO
  - WORK WEEK/OUTAGE ____
  - WORK DOCUMENT(S) SECONDARY VALVE WORK DURING
- OTHER (JUSTIFY) 2RE02

APPROVED BY: ____ REQUIRED FOR PRI 1, 2, 3

6. SUBJECT: ~~02~~ OPMP02-ZG-0011 - (ALTERNATIVE VALVE PACKING AND LIVE-LOAD VALVE PACKING) AND SITE SPECIFICATION - 5L749TS1018 (ALTERNATIVE VALVE PACKING AND LIVE LOAD DESIGN)

7. ACTION REQUESTED: APPROVE THE USE OF THE "INDIVIDUAL VALVE SURVEY SHEET" FROM SITE SPEC - 5L749TS1018 (PG 16) ~~INSTEAD OF~~ IN PLACE OF ADDENDUM 1 OF OPMP02-ZG-0011. (SEE ATTACHED COPIES)

8. REASON FOR REQUEST: PRE-OUTAGE SURVEYS WERE PERFORMED USING SPEC SURVEY SHEETS. THESE SURVEY SHEETS WERE INSERTED IN THE WORK PACKAGES AND USED TO ORDER PREFORM PACKING FROM CHESTERTON. (SEE CONTINUATION SHEET)

9. REFERENCE DOCUMENTS: OPMP02-ZG-0011
5L749TS1018

10. ORIGINATOR (PRINT)	11. EXT.	12. DATE	TIME	DEPT./DIV.
A.D. JOYNT	7777	10-4-91	10:57	IPS/CMD

10A SUPERVISOR: R.F. PENN

14. NONCONFORMING CONDITIONS ONLY (REPORTABILITY CHECK)

MODE LIMITATION NA CRA REQUESTED ☐ YES ☐ NO CRA DUE BY NA (DATE) AT ____ (TIME)

REASON FOR REQUEST NA

SHIFT SUPERVISOR NA NA / (DATE / TIME)

SHIFT SUPERVISOR REMARKS NA

ROUTING TABLE (DEPT. MANAGER NAMES ONLY)

FROM/DATE SENT	TO	DATE RECEIVED
McBurnett / 10-4-91	DENVER	PKG X-FER Tomm fm Pd
D.J. Denver 10-11-91	M. J. McBurnett	Per J Give to Milton
Additional RFA's # ~~91~~-1520 or	WR102367	~~Bushing~~
NNJ/PEW	(91 - 1852) + (91-1520) B	B.J. (Machining) To BJ
	(91 - 0791)	fm (Carbon Bushing) Request # 91-1754
	(91 - 1341)	NNJ 91-1927
	(91 - 1859)	

STP 646B (01/91) SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

REQUEST FOR ACTION

PAGE ____ OF ____

RFA # 91-1495

15 RESPONSE Technically, the Individual Valve Survey Sheets can be used rather than the Addendum 1 Valve Packing Data Sheets when listing information for alternate style valve packing. The Individual Valve Survey Sheets contain adequate information to ensure that the correct upper rings, graphite rings, and carbon spacers can be procured.

However, it should be cautioned that procedure compliance is necessary. When working to OPMP02-ZG-0011, it is permissible to include a Blank Addendum 1 Data Sheet in the package with a "See Attached" written across it, and a completed Individual Valve Survey Sheet attached.

FOR NONCONFORMING CONDITIONS ONLY

RESPONDING DEPARTMENT'S DISPOSITION DETAILS

REJECT REPAIR REWORK USE-AS-IS

PARTIAL ☐ FINAL ☐ INVALIDATE ☐

DESIGN CHANGE DOCUMENT REQUIRED?

YES ☐ NO ☐ IF YES, LIST IN BLOCK 17

ADMINISTRATIVE CONTROL(S)/ACTION(S) REQUIRED PER FINAL DISPOSITION?

NO ☐ YES ☐

IMPLEMENTING DEPT ____

IMPLEMENTING DEPT CONCURRENCE

____ / ____
DATE

SPR REQUIRED? YES (NO) IF YES, SPR NO ____

RESPONSE BY: K E Schmidt 10-9-91 / 1809 7854 PED
DEPT MANAGER OR DESIGNEE K E Schmidt 10-9-91 / 1809
DATE TIME EXT DEPT./DIV

FOR NONCONFORMING CONDITIONS

16 DISPOSITION APPROVAL:

NA ____ / ____ NA ____ / ____
PLANT MANAGER OR DESIGNEE DATE TIME SHIFT SUPERVISOR DATE TIME

17 NCR DISPOSITION HAS BEEN IMPLEMENTED BY THE FOLLOWING DOCUMENT(S):

DOCUMENT	DATE IMPLEMENTED	IMPLEMENTED BY* (PRINT)	SIGNATURE
	/ /		
	/ /		
	/ /		
	/ /		

*SIGNATURE BY INDIVIDUALS IMPLEMENTING DISPOSITIONS ASSOCIATED WITH WORK DOCUMENTS (I.E. WR, PM, ETC.)

18 RFA CLOSED ON ____ / ____ RFA COORDINATOR ____ / ____
DATE DATE

STP 6460 (01/91) SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

REQUEST FOR ACTION CONTINUATION SHEET

RFA # _____ PAGE _____ OF _____

REASON FOR REQUEST (CONT'D.

VALVES WERE/ARE BEING REPACKED TO CPMPO2-ZG-CC11 & SITE SPEC SL749TS101F HOWEVER THE SPEC "SURVEY SHEET" WAS USED FOR DATA IN LIEU OF ATTACHMENT 1 OF CPMPO2-ZG-CC11

CPMPO2-ZG-CC11 DIFFERENCES AND IS WRITTEN TO THE ALTERNATIVE VALVE PACKING SPEC - SL749TS10F.

(SEE ATTACHMENTS)

VALVE SURVEY SHEET CONTAINS REQUIRED INFORMATION NECESSARY TO STATIC LEAK (PACK) VALVES, WHEREAS, ATTACHMENT 1 OF ZG-CC11 IS PRIMARILY USED AS DATA SHEET FOR LIVE LOAD DESIGN, LIVE LOAD WORK PACKAGES ARE ALREADY SET-UP WITH ATTACHMENT 1.

DATE _____

INDIVIDUAL VALVE SURVEY SHEET

DISTRIBUTOR _____ COMPLETED BY _____
SPECIALIST _____ REVIEWED BY _____
UTILITY _____ PLANT _____ VALVE NO. _____ PAGE NO. _____

VALVE DATA

EPI: _____ DWG. NO: _____

MFG. _____ MODEL NO: _____

SIZE _____ TYPE: _____

SYSTEM PRESSURE _____ TEMP. _____

LOCATION
SYSTEM _____
AREA _____

CONTAINMENT inside ☐ outside ☐
SAFETY RELATED yes ☐ no ☐

PROCEDURE NO. _____

ACTUATION power ☐ manual ☐
FREQUENCY OF ACTUATION _____

PACKING DATA

STYLE 5300/GTPE
ID _____ OD: _____ HT. _____

QTY: _____ ITEM # _____

STYLE ONE-PC:
ID: _____ OD: _____ HT. _____

QTY: _____ ITEM # _____

SEQUENCE: _____

_____

BUSHING DATA

I.D. _____ OD: _____ HT. _____

QTY: _____ ITEM NO. _____

STUFFING BOX DATA

STEM O.D. _____ BOX I.D.: _____

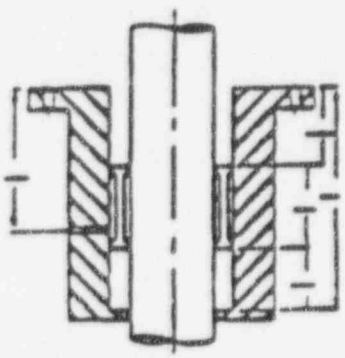
BOX DEPTH _____

LANTERN RING:
yes ☐
no ☐
HT _____

PIPED ☐

PLUGGED ☐

LANTERN RING



DATE PACKED: _____ _____
_____ _____ _____
_____ _____ _____

COMMENTS: _____

_____

_____

_____

_____

_____

_____

_____

_____

1.0 Purpose and Scope

1.1 This procedure provides instructions for the installation and documentation of alternative valve packing designs and live-load valve packing designs for valves which exhibit unacceptable packing leakage or unacceptable packing life.

1.2 This procedure applies to safety-related and non-safety related valves within the scope of Specification SL749TS1018 which would benefit from the use of alternative valve packing designs or live-load valve packing designs, including the following:

1.2.1 Valves with valve stem orientation not in the vertical direction providing side-loading forces on the valve packing.

1.2.2 Valves located in high radiation areas or other areas inaccessible during plant operations.

1.2.3 Continuously modulating control valves.

1.2.4 Valves which may significantly impact the safe and efficient operation or reliability of the plant as a result of packing leakage.

2.0 Precautions

2.1 Lubricants, markers and solvents used shall be controlled in accordance with the Expendable Materials Manual.

2.2 Rubber gloves shall be used when handling soft packing materials at all times to prevent contamination.

2.3 Valves shall not be repacked under pressure unless designed specifically for this purpose and only if the Mechanical Maintenance Supervisor authorizes.

2.4 If any corrosion of valve parts is discovered, it shall be immediately reported to the Mechanical Maintenance Supervisor.

2.5 Observe all Radiation Work Permit requirements when working in a radiologically restricted area, and treat all materials and fluids as contaminated unless verified otherwise by Health Physics personnel.

3.0 Prerequisites

3.1 Work Package has been approved including a Valve Packing Data Sheet (Addendum 1) describing valve packing design to be installed with the Planner Section completed by the Maintenance Planner and the Cognizant System Engineer in accordance with the instructions in Addendum 1.

NNI

ADDENDUM 1
VALVE PACKING DATA SHEET
(Page 1 of 2)

Front of Typical Form

PACKIN.DRW 08/90

VALVE PACKING DATA SHEET
OPMP02-ZG-0011

PLANNER

[1] EAN: 90042520

[2] ACT NO: SD-118047

[3] TAG/TPNS: SQ152XSD002A

[4] VALVE MFG.: VOGT

[5] VALVE TYPE: GLOBE

[6] VALVE SIZE AND PRESSURE: 1"

[7] VALVE FIGURE NO.: — NA —

[8] VALVE ACTUATOR: ☐ POWER ☒ MANUAL

[9] BONNET TYPE: ☐ BOLTED ☒ WELDED ☐ OTHER ____

[10] PACKING DESIGN

CONFIGURATION ☒ ADDENDUM 2 CONFIGURATION H ☐ OTHER (___ SHEETS ATTACHED DETAILING DESIGN

LIVE LOAD ☒ NO ☐ YES (___ SHEETS ATTACHED DETAILING DESIGN)

ENGINEER: A.D. Joynt (PRINT NAME), [signature] (SIGNATURE), 4-15-92 (DATE)

[11] COMMENTS: SEE Attached SURVEY SHEET

[12] PLANNER: A.D. Joynt (PRINT NAME), [signature] (SIGNATURE), 4-15-92 (DATE), 7947 (EXTENSION)

CRAFTSMAN

[13] VALVE STUFFING BOX DATA

A - STUFFING BOX ID: .520"

B - VALVE STEM OD: .375"

C - STUFFING BOX DEPTH: 1.375"

D - GLAND LIP HEIGHT: — NA

[14] LANTERN RING? ☐ YES ☒ NO

LOCATED NA FROM BOTTOM OF STUFFING BOX

LANTERN RING HEIGHT: NA

[15] VALVE PACKING GLAND DATA

GLAND STUD TYPE: ☐ SWING BOLTS ☐ ALL THREAD ☐ OTHER: NA

E - GLAND STUD DIAMETER: 5/16"

F - RADIAL CLEARANCE: 1/4"

G - AXIAL CLEARANCE: 1/4"

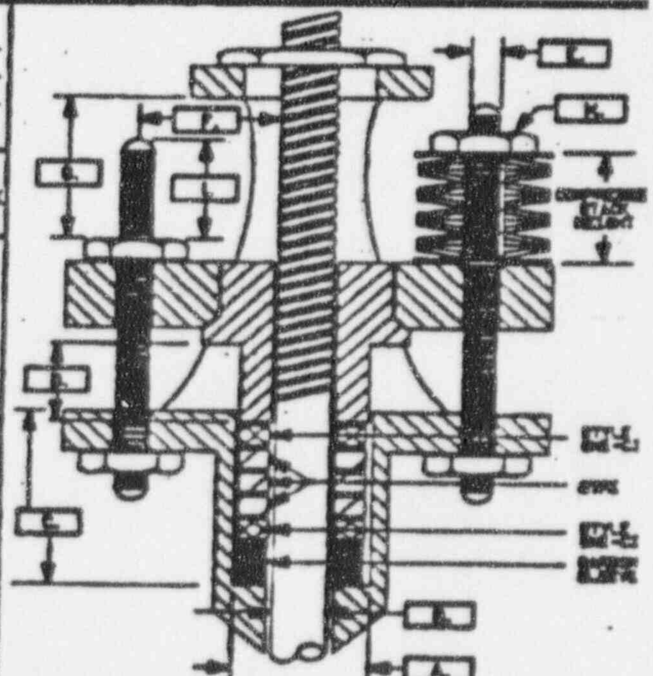
H - NUT SIZE: 1/2"

I - AVAILABLE STUD LENGTH: NA

[16] GLAND NUTS TORQUED? ☒ YES ☐ NO

TORQUE APPLIED: 5 in. lbs.

[17] COMMENTS: PER RFA 91-1456, 91-1852, [initials] 4-15-92



REVIEW

[18] CRAFTSMAN: D. LENZ (PRINT NAME), by [signature] (SIGNATURE), 4-15-92 (DATE)

[19] FOREMAN: Rick Jones (PRINT NAME), by [signature] (SIGNATURE), 4-15-92 (DATE)

[20] ENGINEER: A.D. Joynt (PRINT NAME), [signature] (SIGNATURE), 4-15-92 (DATE)

WR# SD 118047

3Q152XSD00002A

DATE 10-10-91

INDIVIDUAL VALVE SURVEY SHEET

DISTRIBUTION: CHESTERTON
SPECIALIST: —
UTILITY: STP PLANT: UNIT 2

COMPLETED BY: M.V. Ketkel
REVIEWED BY:
VALVE NO. 3Q-00002A PAGE NO. 2

VALVE DATA

EM-3Q/152XSQ-0024 DWG. NO: — N A —
MFG: VOGT MODEL NO: —
SIZE: 1" TYPE: GLOBE
SYSTEM PRESSURE: 1440 PSI TEMP: 600°F
SECTION
SYSTEM AREA: DGB - "A" TRAIN
CONTAINMENT: INSIDE ☐ OUTSIDE ☒
SAFETY RELATED: YES ☒ NO ☐
PROCEDURE NO: OPMP02-ZG-0011
ACTUATION: POWER ☐ MANUAL ☒
FREQUENCY OF ACTUATION: N/A

PACKING DATA

STYLE 5300/GTP: ID .500 OD .875 HT. NA
QTY: 3 ITEM # NA
STYLE ONE: ID .500 OD .875 HT. NA
QTY 2 ITEM # NA
SEQUENCE: CARBON BUSHING, STYLE - ONE
3 - 5300/GTP, 1 - STYLE ONE

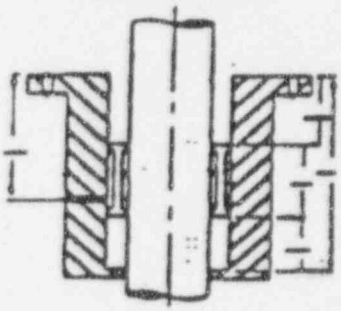
BUSHING DATA

I.D. .500 O.D. .875 HT. .437
QTY. 1 ITEM NO AIA

STUFFING BOX DATA

STEM O.D. .500 BOX I.D. .875
BOX DEPTH 1.375
LANTERN RING: YES ☐ NO ☒ HT. NA
PIPED ☐ PLUGGED ☐ NA

LANTERN RING



DATE PACKED: 10-11-91

COMMENTS:
Gland Nuts - ½"
Gland Studs - 5/16"
Stud Length - 2½"
VALVE IN OPEN POSITION
LOC. - "A" TRAIN "E" SIDE OF SA AIR RECIEVER 22.

08:06:40 07 AUG 1991 | SPARE PARTS / MATERIAL USED | WR # SD-118047 | JAN # 90043520

HL&P P/N	ISN	QTY REQ	QTY O/H	SPARE PARTS / MAT'L DESC	QTY USED
558-30314		0	16	PACKING, 1/4 IN, MULTI-LOCK BRAIDED	
558-30315		0	32	PACKING, SIZE 5/16 IN, STYLE M1630	
558-30316		0	16	PACKING, 3/8 IN, MULTILOCK BRAIDED GRAPHITE F	
558-30317		0	26	PACKING, 7/16 IN, JOHN CRANE 1625GF	
558-30318		0	19	PACKING, BRAIDED, GRAPHITE FILAMENT, 1/2 IN X	
558-30319		0	37	PACKING, 9/16 IN, MULTI-LOCK BRAIDED	
558-30320		0	40	PACKING, 5/8 IN, MULTI-LOCK BRAIDED	
558-30321		0	22	PACKING, RIBBON, 100% GRAPHITE WITH ZINC DUST	
558-30322		0	1	PACKING, RIBBON, STYLE 241, 100% GRAPHITE	
558-30324		0	0	PACKING, RIBBON, 100% GRAPHITE, WITH ZINC DUS	
MS75000	SHOP STOCK MRR #	7/16		CHESTERTON CARBON BUSHING 7/16	7/16"
↓	9109270042	2		CHESTERTON STYLE-ONE 2	2
	9109270042	3		CHESTERTON 5300/6TPI 3	3
501-32948	90120627	TRACE		CHESTERTON LUBRICATE	TRACE

NA

IR NUMBER(S)	CHARGE ACCOUNT	COST CODE
MS75000	324-531-000	0840

SUMMARY OF WORK PERFORMED

WR # SD-118047

WAN # 90043520

AS FOUND CONDITION: PACKING LEAK, VALVE FOUND IN THE OPEN POSITION.

FAILURE DESCRIPTION: WORN PACKING

CAUSE OF FAILING: WORN PACKING

CORRECTIVE ACTION: UNPACKED VALVE, CLEANED AND INSPECTED ALL PARTS. LUBRICATED STUFFING BOX, DROPPED CARBON BUSHING TO BOTTOM OF BOX, LUBRICATED + INSTALLED A 5 RING GRAFOIL STACK-UP. LUBRICATED GLAND, STUDS AND TORQUE TO 5 FT LBS STROKED VALVE SEVERAL TIMES, LEFT VALVE IN THE OPEN POSITION + RETORQUED TO 5 FT LBS. (NOTE) VALVE REPACKED AND TORQUED I.A.W. ALTERNATE VALVE PACKING SPECIFICATION # SL749TS1018 STEP 4.8 USING CHESTERTON RECOMMENDED TORQUE DATA SPECIFICATION'S SHEET. DONNIE LOWE Donnie Lowe 10-11-91

SUMMARY OF WORK PERFORMED

WR # SD-118047

JAN # 90043520

AS LEFT CONDITIONS: STACKED VALVE SEVERAL TIMES & LEFT IT IN THE OPEN POSITION, MAINTAINED GOOD HOUSEKEEPING. DONNIE LENZ Donnie Lenz 10-11-91

RMRG COMMENT:

VALVE WAS REPACKED WITH PACKING ORDERED UNDER A NON-CLASS P.O. - WR # SP-155981 WAS WRITTEN TO REPLACE PACKING WITH CLASS PACKING. REF: REA-92-0250

A.D. JAYNT [signature]

4-14-92

Cog Sys Engr Contacted [YES] [NO] [N/A] Parts Needed for Root Cause [YES] [NO] [N/A]

Parts Discarded [YES] [NO] [N/A] Parts to be Rebuilt [YES] [NO] [N/A] WR# N/A

Area Clean:	[YES]	[NO]	[N/A]	Insulation Removed:	[YES]	[NO]	[N/A]
Tools Removed:	[YES]	[NO]	[N/A]	Insulation Reinstalled:	[YES]	[NO]	[N/A]
Hardware Restored:	[YES]	[NO]	[N/A]	Scaffolding Removed:	[YES]	[NO]	[N/A]

WORK COMPLETED: Donnie Lenz (Craftsman) 10-11-91 (Date) 12:20 (Time)

ADDENDUM 1
VALVE PACKING DATA SHEET
(Page 1 of 2)

Front of Typical Form

PACKDS.BRW 08/90

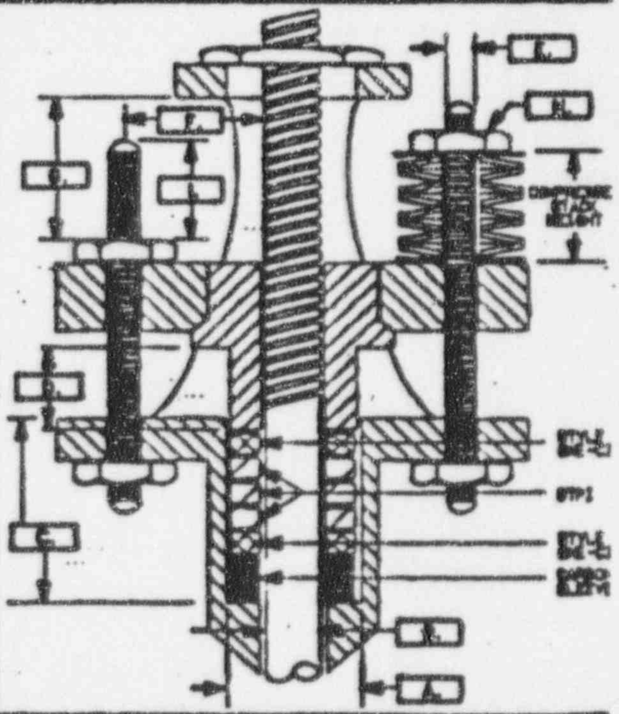
VALVE PACKING DATA SHEET
OPMP02-ZG-0011

PLANNER

1. WAN: 91023397
2. ACT NO: MS 151560
3. TAG/TPNS: 2S102TMS0021
4. VALVE MFG.: Anchor Darling
5. VALVE TYPE: GATE
6. VALVE SIZE AND PRESSURE: 8" / 1300
7. VALVE FIGURE NO.:
8. VALVE ACTUATOR: ☐ POWER ☒ MANUAL
9. BONNET TYPE: ☒ BOLTED ☐ WELDED ☐ OTHER ____
10. PACKING DESIGN
    CONFIGURATION ☑ ADDENDUM 2 CONFIGURATION E ☐ OTHER (___ SHEETS ATTACHED DETAILING DESIGN)
    LIVE LOAD ☒ NO ☐ YES (___ SHEETS ATTACHED DETAILING DESIGN)
    ENGINEER: A.D. JOYNT (PRINT NAME), [signature] (SIGNATURE), 10-14-91 (DATE)
11. COMMENTS: RFA 91-1518 RAM 10391
12. PLANNER: R.E. Massengal (PRINT NAME), [signature] (SIGNATURE), 10-5-91 (DATE), 8259 (EXTENSION)

CRAFTSMAN

13. VALVE STUFFING BOX DATA
    A - STUFFING BOX ID: 2.500
    B - VALVE STEM OD: 1.750
    C - STUFFING BOX DEPTH: 4.625
    D - GLAND LIP HEIGHT: ____
14. LANTERN RING? ☒ YES ☐ NO
    LOCATED ___ FROM BOTTOM OF STUFFING BOX
    LANTERN RING HEIGHT: 1.185
15. VALVE PACKING GLAND DATA
    GLAND STUD TYPE: ☒ SWING BOLTS ☐ ALL THREAD ☐ OTHER ____
    E - GLAND STUD DIAMETER: .750
    F - RADIAL CLEARANCE: ____
    G - AXIAL CLEARANCE: ____
    H - NUT SIZE: 1.250
    I - AVAILABLE STUD LENGTH: ____
16. GLAND NUTS TORQUED? ☒ YES ☐ NO
    TORQUE APPLIED: 36 FT. lb
17. COMMENTS: Packed with Lantern Ring to bottom of stuffing Ring height 1.185 Carbon packing 41-style rings 3-STPI and 1 style ring. Torqued to 36 FT lb



REVIEW

18. CRAFTSMAN: Huey W Powell (PRINT NAME), [signature] (SIGNATURE), 11/7/91 (DATE)
19. FOREMAN: Rick Jones (PRINT NAME), [signature] (SIGNATURE), 11-21-91 (DATE)
20. ENGINEER: A.D. JOYNT (PRINT NAME), [signature] (SIGNATURE), 1-30-92 (DATE)

09:44:00 28 JUN 1991

SPARE PARTS / MATERIAL USED

WR # MS-151560

WAN # 91023397

WLGP P/N	ISN	QTY REQ	QTY O/H	SPARE PARTS / MAT'L DESC	QTY USE
MS0076000	NLL# 9107 19035	1		CARBON BUSHING 1.750 x 2.500 x 1.000 x .375	1
ITEM 9,345 MS0076000	NLL# 9108 01064	3		5400/6TPI LOT# 17080-291A CHROMATE	3
ITEM #3567 MS0076000	NLL# 9108 01064	2		ONE-CI LOT# 26172054	2
501-3294B	—	T		CHROMATE ANTI-SEIZE	TBA
				NA	
				ALL LIVE LOAD PARTS IN NNI TRAILER UNDER WR 92695 WHL	

IR NUMBER(S) MRR#'S 9107 19035 9108 01064

PO MS00076000

CHARGE ACCOUNT ~~H-9540~~ 322-530/000

COST CODE 840

SUMMARY OF WORK PERFORMED

WR # MS-151560
WAN # 91023397

AS FOUND CONDITION: VALVE LOCKED IN OPEN POSITION

FAILURE DESCRIPTION: PACKING LEAKING.

CAUSE OF FAILING:

CORRECTIVE ACTION: IDENTIFIED VALVE TO WORK PACKAGE. HAD OPERATIONS TO REMOVE LOCK. REMOVED 4 RINGS OF PACKING, REMOVED LANTERN RING, REMOVED 4 RINGS OF PACKING CLEANED STUFFING BOX, LANTERN RING, STEM AND PACKING STUD. REPACKED LANTERN RING TO BOTTOM OF STUFFING BOX, CARBON BUSHING 1.625" LONG, 1 STYLE ONE - 3 GTPI RINGS - 1 STYLE ONE PACKING. LUBRICATED WITH CHESTERTON ANTI-SEIZE, STUFFING BOX, STEM, PACKING & PACKING GLAND STUDS. TORQUED PACKING TO 30 FT LB CLEANED WORK AREA, VALVE IN OPEN POSITION, RETURNED TOOLS TO TOOL TRAILER. ALTERNATE VALVE PACKING PER RFA 91-1578

Huey W. Powell Huey W. Powell 10/2/91

RMRG COMMENT: NO WORK WAS PERFORMED UNDER REVISION 0 OF THIS WORK PACKAGE.

A.D. JOYNT 1-30-92

SUMMARY OF WORK PERFORMED

WR # MS-151560
WAN # 91023397

AS LEFT CONDITIONS: VALVE STROKES SMOOTHLY, VALVE IN OPEN POSITION & WORK AREA CLEAN.

Cog Sys Engr Contacted [YES] [NO] [N/A] Parts Needed for Root Cause [YES] [NO] [N/A]

Parts Discarded [YES] [NO] [N/A] Parts to be Rebuilt [YES] [NO] [N/A] WR# NA

Area Clean:	[YES]	[NO]	[N/A]	Insulation Removed:	[YES]	[NO]	[N/A]
Tools Removed:	[YES]	[NO]	[N/A]	Insulation Reinstalled:	[YES]	[NO]	[N/A]
Hardware Restored:	[YES]	[NO]	[N/A]	Scaffolding Removed:	[YES]	[NO]	[N/A]

WORK COMPLETED: Huey V. Powell Craftsman 10/7/91 Date 1700 Time CATE ENTRY: ED. Hess 4/4

ADDENDUM 1
VALVE PACKING DATA SHEET
(Page 1 of 2)

Front of Typical Form

PACKING.DRW 08/90

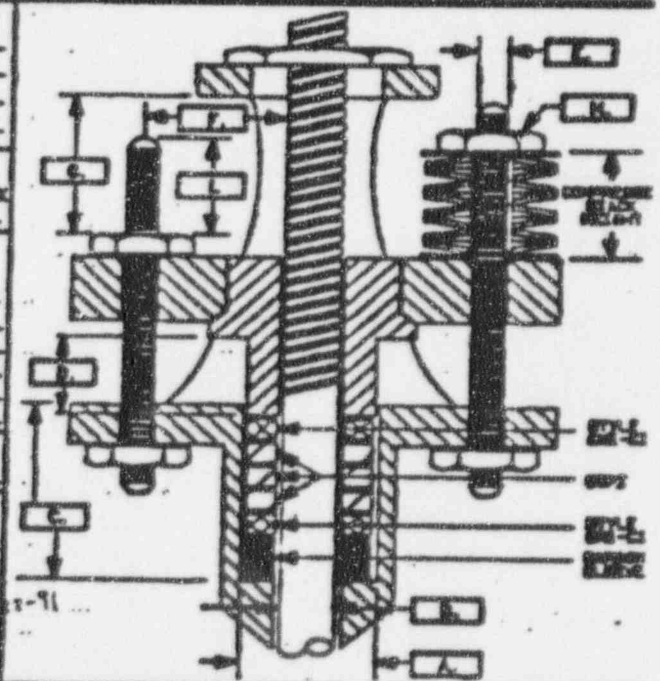
VALVE PACKING DATA SHEET
OPMP02-ZG-0011

PLANNER

1. EAN: 91009493
2. ACT NO: MS-105596
3. TAG/TPNS: 75102TMS0263
4. VALVE MFG.: Karotest Bont
5. VALVE TYPE: Globe
6. VALVE SIZE AND PRESSURE: 1-900
7. VALVE FIGURE NO.: 6357-00016-KP
8. VALVE ACTUATOR: ☐ POWER ☒ MANUAL
9. BONNET TYPE: ☐ BOLTED ☒ WELDED ☐ OTHER
10. PACKING DESIGN
    CONFIGURATION ☐ ADDENDUM 2 CONFIGURATION ___ ☒ OTHER (1 SHEETS ATTACHED DETAILING DESIGN)
    LIVE LOAD ☒ NO ☐ YES (___ SHEETS ATTACHED DETAILING DESIGN)
    ENGINEER A.D. Joynt, [signature], 3-4-92
    PRINT NAME, SIGNATURE, DATE
11. COMMENTS: SEE ATTACHED
12. PLANNER A.D. Joynt, [signature], 3-4-92, 7947
    PRINT NAME, SIGNATURE, DATE, EXTENSION

CRAFTSMAN

13. VALVE STUFFING BOX DATA
    A - STUFFING BOX ID 1.000
    B - VALVE STEM OD .625
    C - STUFFING BOX DEPTH 1.250
    D - GLAND LIP HEIGHT .500
14. LANTERN RING? ☐ YES ☒ NO
    LOCATED N/A FROM BOTTOM OF STUFFING BOX
    LANTERN RING HEIGHT N/A
15. VALVE PACKING GLAND DATA
    GLAND STUD TYPE: ☒ SWING BOLTS ☐ ALL THREAD ☐ OTHER N/A
    E - GLAND STUD DIAMETER .375
    F - RADIAL CLEARANCE N/A
    G - AXIAL CLEARANCE
    H - NUT SIZE .562
    I - AVAILABLE STUD LENGTH .750
16. GLAND NUTS TORQUED? ☒ YES ☐ NO
    TORQUE APPLIED 5 Ft-lbs
17. COMMENTS
    [initials] 3-4-92 [illegible]
    DCF RFA 91-1854 (struck through) B.H. [illegible]-91
    PER RFA-91-1852



REVIEW

18. CRAFTSMAN David M Ellison, [signature], 10-22-91
    PRINT NAME, SIGNATURE, DATE
19. FOREMAN Bobby Kord, [signature], 10-22-91
    PRINT NAME, SIGNATURE, DATE
20. ENGINEER A.D. Joynt, [signature], 3-4-92
    PRINT NAME, SIGNATURE, DATE

SR MS-105596
WAN 91009493

DATE 9-26-91

INDIVIDUAL VALVE SURVEY SHEET

DISTRIBUTOR CHESTERTON
SPECIALIST —
UTILITY STP PLANT UNIT 2
COMPLETED BY —
REVIEWED BY —
VALVE NO 75-025 3 PAGE NO —

VALVE DATA

EN: 75 102 TMS0253 DWG. NO: 6359-00016-KP
MFG Bonn MODEL NO: —
SIZE: 1" TYPE: Globe
SYSTEM PRESSURE 800 TEMP —
LOCATION
SYSTEM MS
AREA Turb Deck on Top of MSR-22 So. End
CONTAINMENT Inside ☐ Outside ☒
SAFETY RELATED: yes ☐ no ☒
PROCEDURE NO OPMP02-ZG-0011
ACTUATION power ☐ manual ☒
FREQUENCY OF ACTUATION N/A

PACKING DATA

STYLE 5300/GTP
ID .625 OD 1.000 HT .875
QTY 1 ITEM # 01015 3
STYLE ONE-CC
ID 03765 OD 1.00 HT .187
QTY 2 ITEM # 03765 3
SEQUENCE: W-G-W

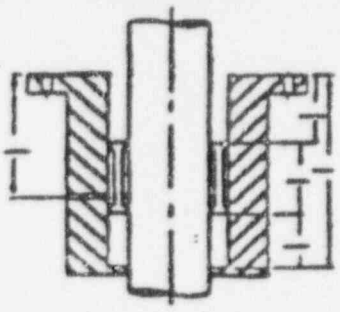
BUSHING DATA

N/A
I.D. — O.D. — HT —
QTY — ITEM NO —

STUFFING BOX DATA

STEM O.D.: .625 BOX I.D.: 1.000
BOX DEPTH: 1.760
LANTERN RING: yes ☐ no ☒ HT N/A
PIPED ☐ N/A
PLUGGED ☐

LANTERN RING



DATE PACKED: 10-22-91

COMMENTS: NEEDS LAGGING REMOVED ALSO NEEDS SCAFFOLDING TO WORK VALVE, swing gate I broke the other need replacement NOTE - GRAPHOIL DIE FORMED RING WAS 7/8" HIGH SO ONLY 1 RING WAS USED

13:21:48 31 MAR 1991

SPARE PARTS / MATERIAL USED

WR # MS-105596

WAN # 91009493

EL&P P/N	ISN	QTY REQ	QTY O/E	SPARE PARTS / MAT'L DESC	QTY USED
~~550-30514~~		~~1~~	~~12~~	~~PACKING, 1/4 IN. MULTI-LOCK BRAIDED~~	
~~550-30521~~		~~1~~	~~22~~	~~PACKING, RIBBON, 100% GRAPHITE WITH ZINC DUST~~	
501-52948		TRACE		CHESTERTON ALTI SEIZE	TRACE
501-6765		2		SWING Bolts	2
501-6766		2		SWING Bolt pins	2
501-37623		2		NUTS	2
MS75008	9109270412	2		CHESTERTON STYLE ONE CI	2
MS75008	9109270412	1		CHESTERTON 5300 6TPI	1

IR NUMBER(S)

MR-876736

~~MS-0075000 DC~~

CHARGE ACCOUNT

322-530/000

~~HR5190~~ 2-3-92

COST CODE

840

MS-0075000

MRR # 9109270412

13:21:48 31 MAR 1991 | SUMMARY OF WORK PERFORMED | WR # MS-105596 WAN # 91009493

AS FOUND CONDITION: valve in closed position, valve was corroded at swing bolts and bolts

FAILURE DESCRIPTION: Packing Fatigue valve leaking at packing

CAUSE OF FAILING: Packing Fatigue

CORRECTIVE ACTION: unpacked valve and requested new swing bolts and nuts and pins. left valve unpacked and cleaned and in open position valve stem measured .625 Box ID 1.000 Box Depth 1.250 Dana Ellison 10-22-91 Valve Repacked and torqued to 5 FT LBS in accordance with alternate valve packing specification # SL749Ts.10 step 4.8 using chesterson Recomended torque Data specification sheet. Dana M Ellison, 10-22-91

13:21:48 31 MAR 1991 | SUMMARY OF WORK PERFORMED | WR # MS-105596 WAN # 91009493

AS LEFT CONDITIONS: valve in closed position and dirt condition

Cog Sys Engr Contacted [YES] (NO) [N/A] Parts Needed for Root Cause (YES) [NO] [N/A

Parts Discarded (YES) [NO] [N/A] -- Parts to be Rebuilt [YES] (NO) [N/A] WR# NA

Area Clean:	(YES)	[NO]	[N/A]	Insulation Removed:	(YES)	[NO]	[N/
Tools Removed:	(YES)	[NO]	[N/A]	Insulation Reinstalled:	[YES]	[NO]	[N/
Hardware Restored:	(YES)	[NO]	[N/A]	Scaffolding Removed:	[YES]	[NO]	[N/

WORK COMPLETED: David Ellis (Craftsman) 10-22-91 (Date) 0330 (Time) Cog Sys 10-23-91 LATE ENTRY

ADDENDUM 1
VALVE PACKING DATA SHEET
(Page 1 of 2)

Front of Typical Form

PACKING.SPD 06/90

VALVE PACKING DATA SHEET
OPMP02-ZG-0011

PLANNER

1. RAN: 900054218
2. ACT NO: MS112534
3. TAG/TPNS: 7S102TMSØ248
4. VALVE MFG.: KEROTEST
5. VALVE TYPE: GLOBE
6. VALVE SIZE AND PRESSURE: 1" / 1200 #
7. VALVE FIGURE NO.: 6359-00016-GKP
8. VALVE ACTUATOR: ☐ POWER ☒ MANUAL
9. BONNET TYPE: ☐ BOLTED ☒ WELDED ☐ OTHER ______
10. PACKING DESIGN

CONFIGURATION ☐ ADDENDUM 2 CONFIGURATION ____ ☒ OTHER (1 SHEETS ATTACHED DETAILING DESI...

LIVE LOAD ☒ NO ☐ YES (___ SHEETS ATTACHED DETAILING DESIGN)

ENGINEER A.D. JOYNT, [signature], 3-3-92
PRINT NAME, SIGNATURE, DATE

11. COMMENTS: See Attached

12. PLANNER A.D. JOYNT, [signature], 3-3-92, 7947
PRINT NAME, SIGNATURE, DATE, EXTENSION

CRAFTSMAN

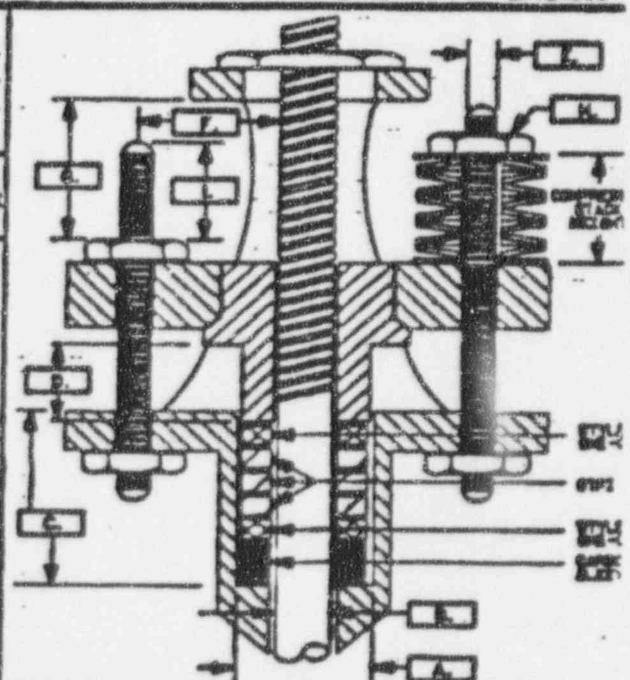
13. VALVE STUFFING BOX DATA [initials] 3-3-92
- A - STUFFING BOX ID: .625
- B - VALVE STEM OD: 1.00
- C - STUFFING BOX DEPTH: 1.250
- D - GLAND LIP HEIGHT: NA

14. LANTERN RING? ☐ YES ☒ NO
LOCATED NA FROM BOTTOM OF STUFFING BOX
LANTERN RING HEIGHT NA

15. VALVE PACKING GLAND DATA
GLAND STUD TYPE: ☐ SWING BOLTS ☒ ALL THREAD ☐ OTHER ______
- E - GLAND STUD DIAMETER: .375"
- F - RADIAL CLEARANCE: NA
- G - AXIAL CLEARANCE: ______
- H - NUT SIZE: .687"
- I - AVAILABLE STUD LENGTH: NA

16. GLAND NUTS TORQUED? ☒ YES ☐ NO
TORQUE APPLIED ______

17. COMMENTS:
Per RFA ~~91-1495~~
91-1852
[initials] 3-3-92



REVIEW

18. CRAFTSMAN P. TALASEK by [signature], 3-3-92
PRINT NAME, SIGNATURE, DATE

19. FOREMAN R. JONES by [signature], 3-3-92
PRINT NAME, SIGNATURE, DATE

20. ENGINEER A.D. JOYNT, [signature], 3-3-92
PRINT NAME, SIGNATURE, DATE

MS 1125 34.

MS 75102T MS 0248

DATE 9-20-91

INDIVIDUAL VALVE SURVEY SHEET

DISTRIBUTOR CHESTERTON
SPECIALIST
UTILITY HL&P PLANT STP/U-2

COMPLETED BY Mark Tobak
REVIEWED BY
VALVE NO. MS-0248 PAGE NO. 2

VALVE DATA

EW 75102TMS0248 DWG. NO. 4359-00016-6 MP
MFG. K-B MODEL NO. 40.10.007
SIZE: 1" TYPE: GLOBE
SYSTEM PRESSURE 1500 TEMP. —
LOCATION:
SYSTEM MS
AREA 55' W TGB 23 COND. OVERHEAD
CONTAINMENT inside ☐ outside ☒
SAFETY RELATED: yes ☐ no ☒
PROCEDURE NO. OPMP02-ZG-0011
ACTUATION: power ☐ manual ☒
FREQUENCY OF ACTUATION —

PACKING DATA

STYLE 5300/GTPI
OD or ID 1.000 ID or OD .625 HT .187
QTY. 3 ITEM # 010152
STYLE ONE-CI
OD or ID 1.000 ID or OD .625 HT .187
QTY. 2 ITEM # 023156
SEQUENCE: 3/8" carbon spacer - 1 style one-CI - 3 style 5300/GTPI - 1 style one-CI

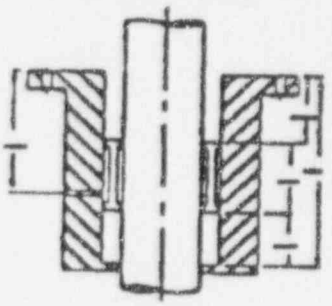
BUSHING DATA

OR MET .1000 ID or OD .625 HT .375
QTY. 1 ITEM NO

STUFFING BOX DATA

STEM O.D. .625" BOX I.D. 1.025"
BOX DEPTH 1.250"
LANTERN RING: yes ☐ no ☒ MT N/A
PIPED ☒ N/A PLUGGED ☐

LANTERN RING



DATE PACKED: 9-30-91

COMMENTS:
GLAND STUDS: .375"
GLAND NUTS: .687"

pg. 11 of

14:22:10 04 FEB 1991

SPARE PARTS / MATERIAL USED

WR # MS-112534

WAN # 90054218

EL&P P/N	ISN	QTY REQ	QTY O/H	SPARE PARTS / MAT'L DESC	QTY USED
558-30314		0	14	PACKING, 1/4 IN, MULTI-LOCK BRAIDED	
558-30315		0	36	PACKING, SIZE 5/16 IN, STYLE N1630	
558-30316		0	28	PACKING, 3/8 IN, MULTILOCK BRAIDED GRAPHITE F	
558-30317		0	28	PACKING, 7/16 IN, JOHN CRANE 1625GF	
558-30318		0	21	PACKING, BRAIDED, GRAPHITE FILAMENT, 1/2 IN X	
558-30319		0	37	PACKING, 9/16 IN, MULTI-LOCK BRAIDED	
558-30320		0	41	PACKING, 5/8 IN, MULTI-LOCK BRAIDED	
558-30321		0	0	PACKING, RIBBON, 100% GRAPHITE WITH ZINC DUST	
558-30322		0	6	PACKING, RIBBON, STYLE 241, 100% GRAPHITE	
558-30141		0	8	PACKING, BRAIDED, 5/16 IN, 45 FT. LONG ('A' B	
501-32617		0	25	PACKING, RIBBON, .015 THK X 3/4 W X 50 FT	
501-32701		0	19	PACKING, RIBBON, .015 THK X 1 IN W X 50 FT	
501-32478		0	5	PACKING, RIBBON, .015 IN THK X 1/2 IN W X 50	
501-32925		0	50	PACKING, RIBBON, .015 IN THK X 1/4 IN W X 50	
MRL # 910927042		2		2 - Style one - C1 Item # 023156 .625 x 1.000 x .187	2
910927042		3		3 - 5300/GTP1 Item # 010152 .625 x 1.000 x .187	3
Shop stock	—	1		1-5/8 x 1.000 Carbon bushing	1
501.329498		T		T72 LUBRICANT	TRAC

N/A

IR NUMBER(S)

MS0075000

CHARGE ACCOUNT 322-530/000

~~N95190~~ 3-92

COST CODE

0540