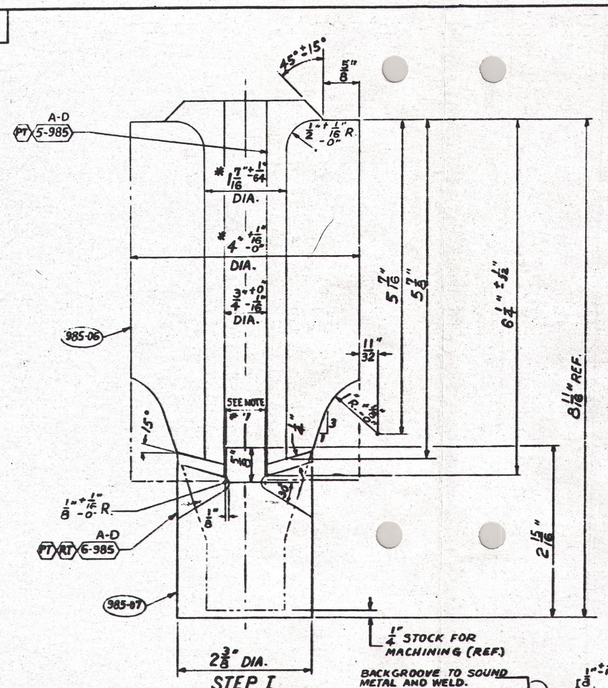
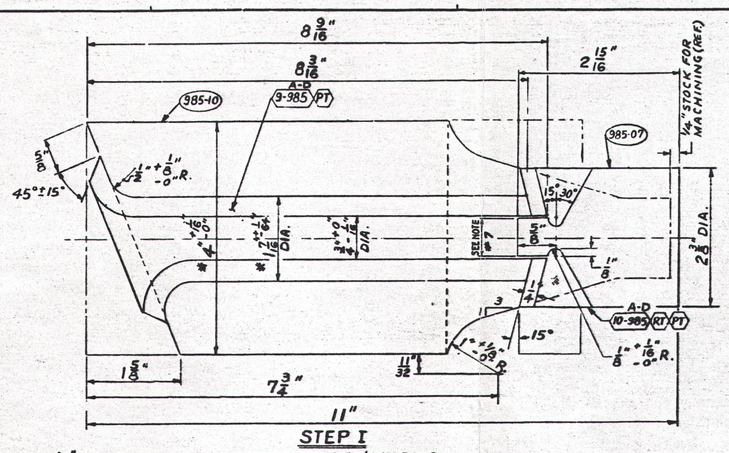
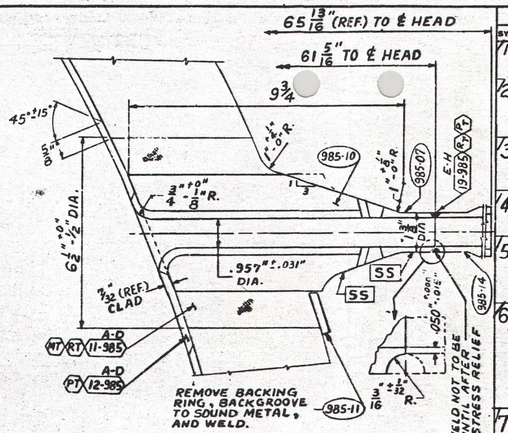
E-231-985



STEP I
PRELIM. MACH. & WELDING



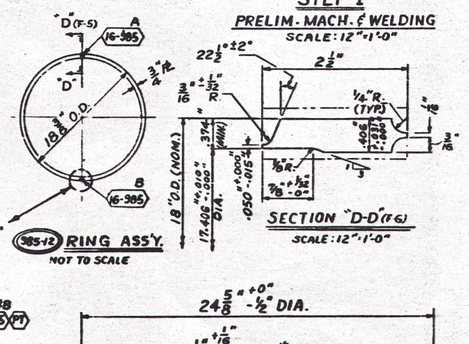
STEP I
PRELIM. MACH. & WELDING
SCALE: 12"=1'-0"



STEP II
WELDING AND FINAL MACHINING
SCALE: 6"=1'-0"

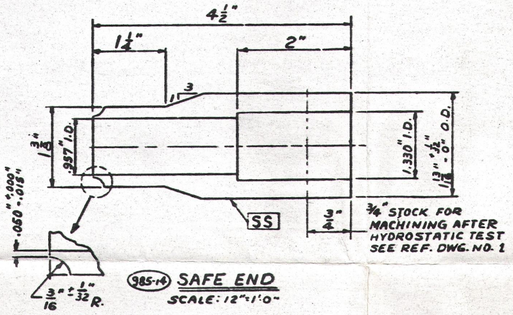
NOTE: THIS WELD NOT TO BE MADE UNTIL AFTER FINAL STRESS RELIEF

985-09 UPPER LEVEL NOZZLE ASS'Y.

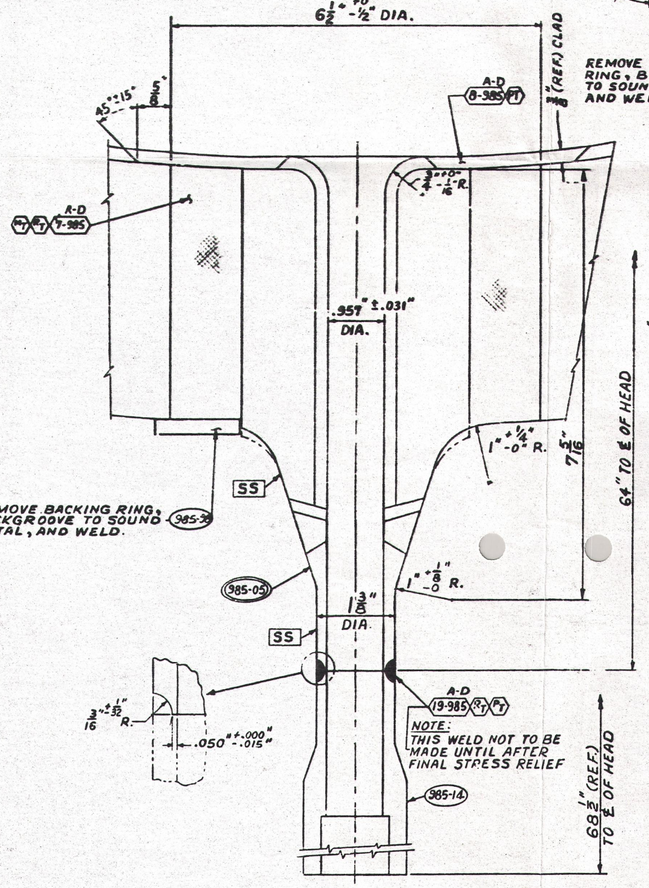


985-12 RING ASS'Y.
NOT TO SCALE

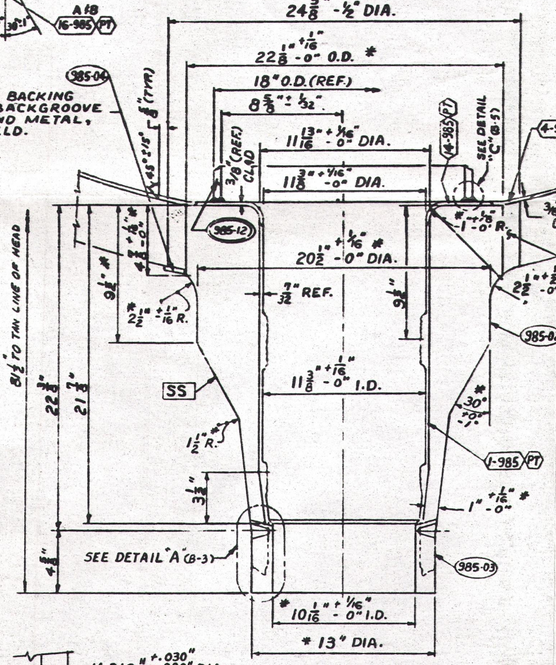
SECTION "D-D" (F-6)
SCALE: 12"=1'-0"



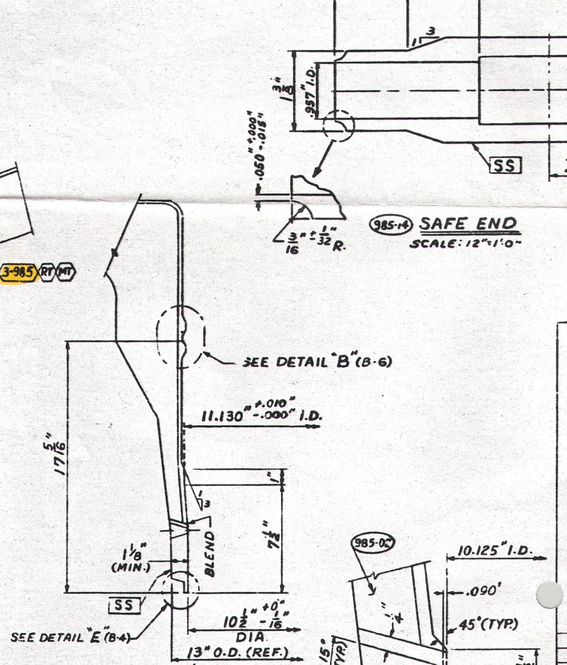
985-14 SAFE END
SCALE: 12"=1'-0"



STEP II
WELDING AND FINAL MACHINING
985-05 LOWER LEVEL NOZZLE ASSY.
SCALE: 12"=1'-0"



STEP #1

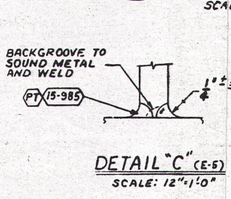


STEP #2

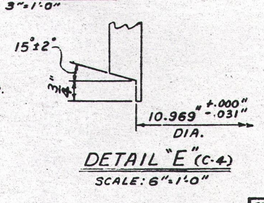
985-01 SURGE NOZZLE ASS'Y.
SCALE: 3"=1'-0"

✓ DENOTES 125 AA FINISH

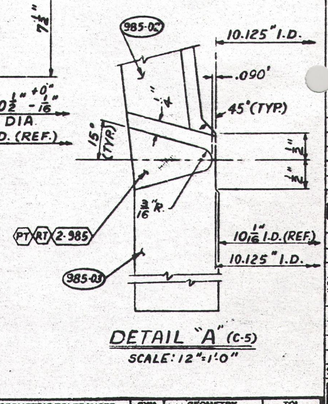
DETAIL "B" (D-4)
SCALE 12"=1'-0"



DETAIL "C" (E-5)
SCALE: 12"=1'-0"



DETAIL "E" (C-4)
SCALE: 6"=1'-0"



DETAIL "A" (C-5)
SCALE: 12"=1'-0"

GEOMETRIC TOLERANCES FOR MACHINED SURFACES UNLESS SPECIFIED ON FACE OF DRAWING	SYM.	GEOMETRY	TOL.
	—	FLAT, & STRAIGHT.	.001 IN.
	⊥	PERPENDICULARITY	.001 IN.
	//	PARALLELISM	.001 IN.
	∠	ANGULARITY	SEE DWG.
	⌯	SYMMETRY	SEE DWG.
	⌖	TRUE POSITION	SEE DWG.
	◎	CONCENTRICITY	.010 TIR
	○	ROUNDNESS	SIZE TOL.

THIS DRAWING IS THE PROPERTY OF COMBUSTION ENGINEERING, INC., WINDSOR, CONN. AND IS NOT TO BE REPRODUCED, OR USED TO FURNISH ANY INFORMATION FOR MAKING OF DRAWINGS OR APPARATUS EXCEPT WHERE PROVIDED FOR BY AGREEMENT WITH SAID COMPANY.

REVISIONS

SYM	ZONE	DESCRIPTION	DATE	APPROVED
1	GEN.	GENERAL REVISION.	BEQ 5-25-67 LDF 6-16-67	6/16/67
2	L/M	NO. REQ'D. WAS (2) FOR ASS'Y. 985-05 & 09.	BEQ 6-19-67 LDF	WWR 6/19/67
	F-5	REVISED SECTION "D-D"		
	GEN.	ADDED A-D TO WELDS 5 THRU 12 AND 17 & 18.		
3	L/M	NO. REQ'D. WAS (4) FOR PC. NO. 985-14.	BEQ 7-12-67 LDF 7/17/67	WWR 7/24/67 RMS 7/25/67
	E-5 & L/M	11 3/8" ±1/16" DIMENSION WAS 11 5/16" ±1/16"		
	L/M	MAT'L. SPEC. WAS SA-240 F-316 FOR PC. NO. 985-14.		
4	GEN.	ADDED INSPECTION SYMBOLS TO WELDS.	BEQ 9-18-67 LDF 9-19-67	WWR 9/19/67 RMS 9/25/67
	E-3	2" DIMENSION WAS 1 3/8"		
	D-6	ADDED 81½" DIMENSION @ STEP #1.		
5	B-6	½" WAS .500" AT TWO PLACES	BEQ 10-25-67 LDF 10-27-67	WWR 10/25/67 RMS 10/25/67
	B-6	11.316" ±.030" -.000" DIA. WAS 11.316" ±.000" -.030" DIA.		
	E-5	9½" DIM. WAS TO INSIDE OF CLAD		
	A-3 C GEN.	DELETED WELD NOS. 13-985, 17-985 A-D & 18-985 A-D		
6	E-8 F-5 H-5 H-3 G-5 F G-7 C-7 H-2	3/8" (REF.) CLAD WAS 3/32" (REF.) CLAD. ADDED 3/8" (REF.) CLAD AT TWO PLACES. ½" ±1/16" R. WAS ½" ±3/16" R. 3/4" ±1/16" R. WAS 3/4" ±0" -1/16" R. ADDED 11/32" DIMENSION LOCATING 1"-1/2" RADIUS REMOVED 1 1/8" DIM. ADDED 7 5/16 D.M. REMOVED 1 1/8" DIM. ADDED 9 1/4" DIM.	BEQ 11-13-67 LDF 11-14-67	WWR 11/13/67 RMS 11/13/67
7	G-5	11" DIMENSION WAS 10 5/8"	BEQ 11-29-67 LDF 11-29-67	WWR 12-1-67 RMS 12-12-67
8	E-8 F-2 GEN.	WELDED PC. 985-14 TO ASS'YS. NO. 985-05 & 09. ADDED WELD NO. 19-985 A-H.	BEQ 12-19-67 LDF 12-20-67	WWR 12-21-67 RMS 12-22-67
9	F-5 E-8 L/M	REVISED WELD PREP. FOR PC. # 985-12. REVISED WELD NO. 7-985 A-D. PC. NO. 985-08 WAS 7½ O.D. x 4 I.D. x ¼" THK.	BEQ 1-29-68 LDF 1-29-68	WWR 1-29-68 RMS 2-27-68
10	B-4 E-8 L/M	ADDED DETAIL "E" REVISED WELD NO. 7-985 A-D PC. NO. 985-08 WAS 7" O.D. x 3½" I.D. x ½" THK.	3-7-68 BEQ LDF	WWR 3/7/68 RMS 3/11/68
11	H-2 F-5	9 3/4" DIMENSION WAS 9 1/4". .406" ±.031" DIM. WAS .406" ±.000"	BEQ 4-12-68 LDF 4-15-68	WWR 4-16-68 RMS 4-18-68
CP 68	12	GEN. RESTORED DWG. BY E.R.C.	4-8-68 JMM	WWR 4-8-68

MATERIAL NOTES

NOTE "A"
MATERIAL TO BE SUPPLEMENTED BY C.E. PURCHASE SPEC. P3C9(d).

NOTE "B"
MATERIAL TO BE PER C.E. PURCHASE SPEC. P43C1(C).

NOTE "C"
MATERIAL TO BE PER C.E. PURCHASE SPEC. F8C3(C).

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See Relief Request #6

ASSY NO.	PC. NO.	NO. REQD.	NOMENCLATURE	MATERIAL	MATERIAL SPEC.	MAT'L NOTE
	985-14	1	SAFE END			
	985-11	1	BACKING RING 7½" O.D. x 4" I.D. x ¼" THK.	CARB. ST'L.	COMM.	
	985-07	1	NOZZLE END			
	985-10	1	NOZZLE FORGING (SEE DETAIL)	ALLOY STL.	A-508-64 Cl. 2	"A"
985-09		4	UPPER LEVEL NOZZLE ASS'Y. - EACH CONSISTING OF:			
	985-14	1	SAFE END MAKE FROM 2" O.D. x 5" LG. BAR (SEE DET.)	STAIN. ST'L.	SA-182 F-316	"C"
	985-08	1	BACKING RING 7½" O.D. x 4" I.D. x ¼" THK.	CARB. ST'L.	COMM.	
	985-07	1	NOZZLE END-MAKE FROM 2 3/8" O.D. BAR 2 1/8" LG. (SEE DET.)	HI-CR-FE	SB-166	"B"
	985-06	1	NOZZLE FORGING (SEE DETAIL)	ALLOY STL.	A-508-64 Cl. 2	"A"
985-05		4	LOWER LEVEL NOZZLE ASS'Y. - EACH CONSISTING OF:			
	985-13	2	RING SEGMENTS 2½" x 3/4" THK. x 27 7/16" DEV. LGTH.	HI-CR-FE	B-168	
985-12		1	RING ASS'Y. - CONSISTING OF:			
	985-04	1	BACKING RING 25 5/8" O.D. x 22 1/8" I.D. x ¼" THK.	CARB. ST'L.	COMM.	
	935-03	1	SAFE END 13" O.D. x 10 1/16" I.D. x 4 3/4"	HI-CR-FE	SB-166	"B"
	935-02	1	NOZZLE FORGING (SEE DETAIL)	ALLOY STL.	A-508-64 Cl. 2	"A"
985-01		1	SURGE NOZZLE ASS'Y. - CONSISTING OF:			

LIST OF MATERIAL - QUANTITIES FOR ONE (1) UNIT - ONE (1) UNIT ON CONTRACT

GENERAL NOTES:

1. FOR STANDARD NOTES SEE REFERENCE DWG. # 3.
2. DOUBLE ARROW INDICATES DIMENSIONS TO A GIVEN REFERENCE LINE.
3. SIZES IN L/M ARE FINISHED SIZES. NO ALLOWANCE MADE FOR FABRICATION OR WELD SHRINKAGE UNLESS NOTED.
4. REFERENCE (REF.) DIMENSIONS ARE FOR INFORMATION ONLY; DO NOT USE FOR FABRICATION.
5. ALL FABRICATION SHALL BE IN ACCORDANCE WITH
7. DIAMETERS NOTED TO BE MACHINED SO THAT MAXIMUM DIAMETRAL CLEARANCE IN MATING PART IS .010"
8. * ASTERISK DENOTES AS ORDERED DIMENSIONS.

REFERENCE DRAWINGS

NO.	TITLE	DWG. NO.
1.	PRESSURIZER OUTLINE	E-231-980
2.	GENERAL ARRANGEMENT	E-231-981
3.	STANDARD NOTES	A-230-544
4.	TOP HEAD FORMING AND WELDING	E-231-983
5.	BOTTOM HEAD FORMING & WELDING	E-231-984

WELD TABULATION

11-985 A-D	WC-2966C-985
12-985 A-D	WG-2966C-985

WELD TABULATION

WELD NO.	C.E. WELD PROC.
1-985	WA-2966C-985
2-985	WB-2966C-985
3-985	WC-2966C-985
4-985	WD-2966C-985
5-985 A-D	WE-2966C-985
6-985 A-D	WF-2966C-985
7-985 A-D	WG-2966C-985

ALL DIMENSIONS APPLY AT REFERENCE TEMP. OF 68° F. SEE NOTE #1
FINISH ✓ UNLESS NOTED
TOLERANCE ON: FRACTIONS ± 1/16" DECIMALS ± .010" ANGLES ± 0° 30' UNLESS NOTED

DWN. BY E. Erasmus DATE 4-10-67
CKD. BY [illegible] DATE 4-18-67
APPD. BY W.W. Rickert DATE 4-20-67
STRESS ENG. R. STONE DATE

COMBUSTION ENGINEERING, INC.
CHATTANOOGA DIVISION

NOZZLE DETAILS FOR CONSUMERS POWER PRESSURIZER

P 033850

CODE IDENT. NO. SIZE A4 DWG. NO. E-231-985

9509220202

ANSTEC APERTURE CARD