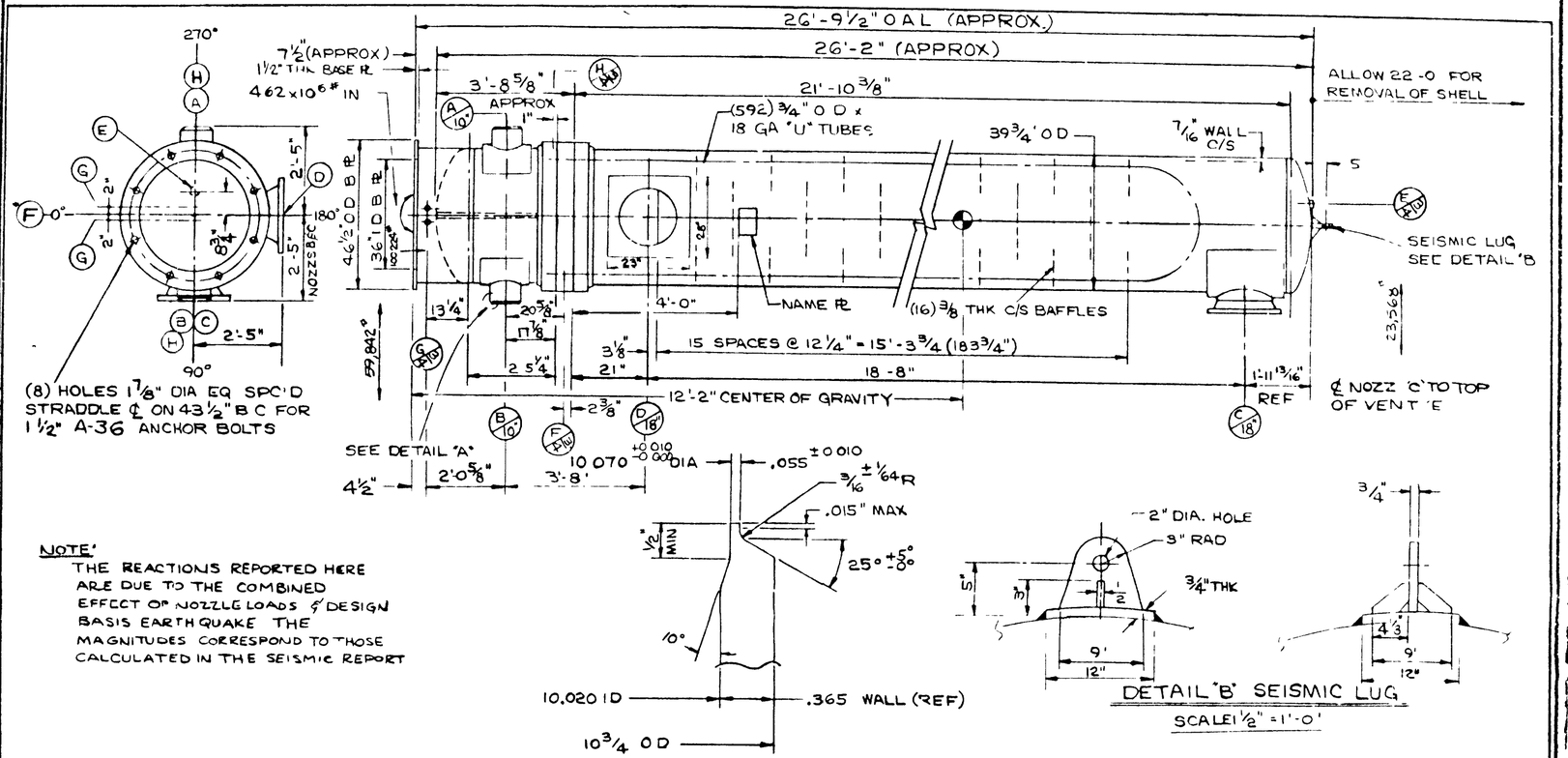

NOTE:
THE REACTIONS REPORTED HERE ARE DUE TO THE COMBINED EFFECT OF NOZZLE LOADS & DESIGN BASIS EARTHQUAKE THE MAGNITUDES CORRESPOND TO THOSE CALCULATED IN THE SEISMIC REPORT

WEIGHTS
EMPTY – 25,000#
FLOODED – 38,000#
TUBE BUNDLE – 9,000#

MATERIAL
SHELL SIDE - CARB STL.
TUBE SIDE – 304 S S

REFERENCE DWGS
ASSEMBLY DWG - 5443 SHEET 1 OF 3
DETAIL DWG - 5443 SHEET 2 OF 3
NAME PL DWG - 5443 SHEET 3 OF 3

SHELL SIDE - (1) PASS
TUBE SIDE - (2) PASS

MARK	SIZE	SCH	FLANGE	PURPOSE	REMARKS
H	¾"		TS FLG C'BORED FOR 3000# SW CPLG SIZE		(2) REQ'D
G	¾"		6000# S W FULL CPLG	CHANNEL DRAIN	(2) REQ'D
F	¾"		¾" NPT (TAP IN T S)	SHELL DRAIN	W/ PLUG
E	¾"		3000# THR'D HALF CPLG	SHELL VENT	
D	18"	STD WALL	150# WNRF	SHELL OUT	
C	18"	7/16" WALL	150# WNRF	SHELL IN	
B	10"	40		TUBE OUT	B O E
A	10"	40		TUBE IN	B O E

W.E. P.O. NO.	SPIN NO.	PLANT	NO REQ'D	CAT J-2 NO
546-CAZ-179475-BN	RHAHRS	CTL	(2)	J 2168 187-188
546-CAZ-179474-BN	RHAHRS	CSL	(2)	J 2168 185-186
546-CAZ-179472-BN	RHAHRS	CQL	(2)	J 2168-181 182
546-CAZ-179473-BN	RHAHRS	CRL	(2)	J 2168-183 184

REV	DATE	DESCRIPTION	BY	CHK
F		INCORPORATED W COMMENTS PER PAR 76 & 142 DIM CHANGED TO 154 CONN G	FN H	
E	4-8-74	REVISED PER LATEST WEST PEP NO. 29 ALSO NOZZLE G I.D. 18 WAS SCH 40 PIPE, SAT CHG		
D	11 12 73	ISSUED FOR APPROVAL	FN&A	
DATE		REVISION	BY	

JOSEPH OAT & SONS, INCORPORATED
CHEMICAL ENGINEERS/DESIGNERS/FABRICATORS
ESTABLISHED 1795
CAMDEN NEW JERSEY 08104

OUTLINE DRAWING RS-628
VERT. RESIDUAL HEAT EXCHANGER

FOR
WESTINGHOUSE ELECTRIC CORP
ATOMIC POWER DIVISION
PITTSBURGH, PA.

PURCHASE ORDER NO SEE DATA BLOCK — NO. REQ'D. 8

JOB NO	DRAWN	DRAWING NO	REV
J-2168-1B	F. McA	5494	2
	DATE 11-1-73		
	SCALE NONE		

REV	DATE	DESCRIPTION
1	4/27/74	REVIEWED W/NO COMMENTS

Outline Drawing RS-628 Vert Residual Ht. Ex.
1364-91,018
SHT 1 OF 1

S/N	LCEC #
J-2168-1B3 & 1B4	43402 & 43404
J-2168-1B5 & 1B6	43403 & 43407
J-2168-1B1	43405
J-2168-1B8	43406

43402-7

FORM N-1 MANUFACTURERS' DATA REPORT FOR NUCLEAR VESSELS

As required by the Provisions of the ASME Code Rules

43404

1. Manufactured by JOSEPH OAT CORPORATION, CAMDEN, NEW JERSEY
(Name and address of Manufacturer)

2. Manufactured for WESTINGHOUSE ELECTRIC CORPORATION, PITTSBURGH, PENNSYLVANIA
(Name and address of Purchaser)

3. Type Vert. (Horiz. or Vert.) Kind Heat Ex. (Tank, Jacketed, Heat Ex.) Vessel No. (2168-1B4) (Mfrs. Serial No.) (_____) (State & State No.) Nat'l Bd. No. 779 Yr. Built 1975

3a. Applicable ASME Code: Section III, Edition 1974, Addenda date July 1, 1974, Case No. _____
Class 3 Shell side
2 Tube side

Items 4–8 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA515-70 (Kind & Spec. No.) T.S. 70,000 (Min. of range specified) Nominal Thickness 7/16 in. Corrosion Allowance 1/8 in. Dia. 3 ft. 3-3/4 in. Length 21 ft. 10-3/8 in.

5. Seams: Long DBW H.T.[1] No R.T. Spot Efficiency 85 %

Girth DBW H.T.[1] No R.T. Spot No. of Courses 3

6. Heads (a) Material SA515-70 T.S. 70,000 (b) Material _____ T.S. _____

Location (Top, bottom, ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (Convex or Concave)
(a) Top	7/16	40"	2-1/2"	2:1				Concave
(b)								

If removable, bolts used _____ (Material, Spec. No., T.S., Size, Number) Other fastening _____ (Describe or attach sketch)

7. Jacket Closure _____
(Describe as ogee & weld, bar, etc. If bar give dimensions, describe or sketch)

8. Design Pressure[2] 150 psi at 200 °F at temp. of _____ °F. Drop Weight _____ Charpy Impact _____ ft-lb ~~Pneumatic~~ Hydrostatic or ~~Combination~~ Test Pressure 225 psi

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary. Material SA515-70 (Kind & Spec. No.) Dia. 39-3/4 (Subject to press.) in. Thickness 5-1/8 in. Attachment Bolted (Welded, Bolted)
W/T304 Weld overlay
Floating. Material _____ (Kind & Spec. No.) Dia. _____ in. Thickness _____ in. Attachment _____

10. Tubes: Material SA249T304 (Kind & Spec. No.) O.D. 3/4 in. Thickness 18 ~~inches~~ or gage _____ Number _____ Type U (Straight or U)

Items 11 to 14 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

11. Shell: Material SA240T304 (Kind & Spec. No.) T.S. 75,000 (Min. of range specified) Nominal Thickness 3/4 in. Corrosion Allowance 0 in. Dia. 3 ft. 3-3/4 in. Length 2 ft. 5-1/4 in.

12. Seams: Long DBW (Welded, Dbl., Single) H.T.[1] No (Yes or No) R.T. Complete Efficiency 100 %

Girth DBW H.T.[1] No R.T. Complete No. of Courses 1

13. Heads: (a) Material SA240T304 T.S. 75,000 (b) Material _____ T.S. _____ (c) Material _____ T.S. _____

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Press. (Convex or Concave)
(a) Top, bottom, ends	.696 min.			2:1				Concave
(b) Channel								
(c) Floating								

If removable, bolts used (a) SA193GrB7, 125,000, 1-1/4", 8UNC, 40 (b) _____ (c) _____ Other fastening _____
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

14. Design pressure[2] 600 psi at 400 °F at temp. of _____ °F. Drop weight _____ Charpy Impact _____ ft-lb ~~Pneumatic~~ Hydrostatic or ~~Combination~~ Test Pressure 872 psi

[1] If Postweld Heat-Treated
[2] List other internal or external pressures with coincident temperature when applicable.