

VR-9267



Jacobs Engineering Group Inc.
Hydrocarbons Division Houston, Texas

VESSEL SPECIFICATION SHEET

CUSTOMER PENNWALT CORP.ITEM NO V-92880 / V-92881JOB NO. 7836; PH-ID-E-2149REV. 2 DATE 6-27-85PREPARED BY IM/JAM DATE 4-19-85

CHECKED BY _____ DATE _____

APPROVED _____ DATE _____

PLANT UNIT 092 - HOUSTON, TXSERVICE OF UNIT SULFUR SEPARATOR (V-92880) NOTE 1NO. REQ'D ONE SIZE 3'-0" ID x 6'-0" TTL FULLY JACKETED

CONSTRUCTION

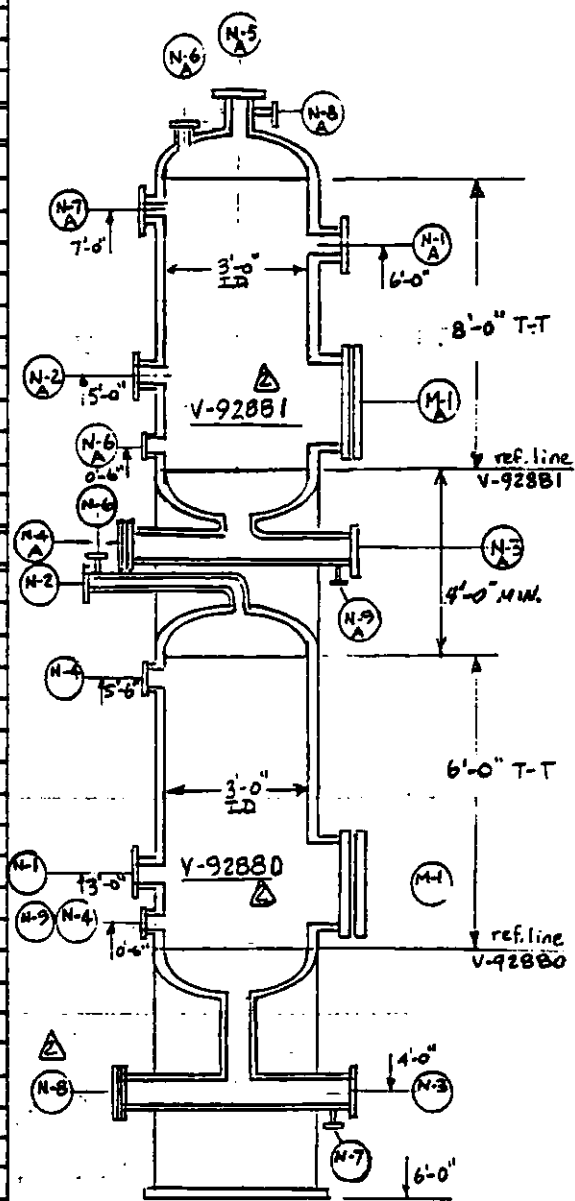
CODE: ASME SECTION VIII DIV. 1 STAMP: YES
 PRESS. (PSIG) MAX. OP. NOR. OP. 350 DESIGN: 450 + FV
 TEMP. (°F.) MAX. OP. NOR. OP. 385 DESIGN: 450
 WIND VELOCITY: 120 MPH CORR. ALLOW.: 1/16"
 STRESS RELIEVE: WITH V-92881 X-RAY 100%
 PHYS. & CHEM. TESTS:

MATERIAL	SPEC.	MATERIAL	SPEC.
SHELL	304L SS	INTERNALS	304L
HEADS	304L SS	BRACE/HINGE/FORM 1	
		PLATFORMS	
SUPPORTS	C.S.	LADDER (CAGED)	
FLANGES 10" & OVER	304L	CLIPS	C.S. SEE NOTE
FLANGES 125 RMS	304L	PAINTER TROLLEY	
PIPE	304L	LIFTING LUGS	C.S.
COUPLINGS		PAINT	PER NOTE (7)
GASKETS	FLEXITALLIC CG	INSULATION	2 1/2" BY PURCH.
BOLTS	SA-193-B7M	INSUL. SUPPORTS	2" RINGS
NUTS	SA-194-2H	JACKET	C.S.

NOZZLE SCHEDULE (V-92880)

MK	SERVICE	NO.	SIZE	RATING	FACING	Q.S. PROJ.
N-1	INLET	1	4"	300 #	RFWN	
N-2	VAPOR OUTLET	1	4"	300 #	RFWN	
N-3	LIQUID OUTLET	1	6"	300 #	RFWN	
N-4	LT	2	3"	300 #	STUB	
N-5						
N-6	STEAM INLET	1	1"	150 #	RFWN	
N-7	CONDENSATE OUT	1	1"	150 #	RFWN	
N-8	DRAIN W/BLIND	1	6"	300 #	RFWN	
N-9	STEAM OUT W/BLIND	1	2"	300 #	RFWN	
N-10						
N-11						
N-12						
N-13						
N-14						
N-15						
M-1	MANHOLE W/BLIND	1	18"	300 #	RF	

V-JACKET: SEE NOTES



SKIRT OPENINGS

REMARKS: (1) DESIGN SPECIFICATIONS FOR V-92881 ARE ON SHEET 2. (2) NO COPPER BEARING ALLOYS PERMITTED. (3) DESIGN VESSEL FOR 80 PSIG EXTERNAL PRESSURE @ 400°F. (4) DESIGN JACKET FOR 80 PSIG & FULL VACUUM AT 400°F. CORROSION ALLOWANCE FOR JACKET = 1/8". (5) PROVIDE 20" COLLARED ACCESS OPENING IN INTERMEDIATE AND BOTTOM SKIRTS. (6) VESSEL DESIGN FOR LETHAL SERVICE. (7) SAND BLAST EXTERNAL C.S. TO "WHITE METAL" AND SHOP PRIME WITH ONE COAT CARBOZING #11 (3MILS MIN. DFT). (8) PROVIDE CLIPS FOR LUGS & RINGS.

I/A

APP

I/F

25-13-023

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
As Required by Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Jett Weld Inc. 4438 Creekmont Houston, Texas 77091
(Name and address of manufacturer)

Manufactured for Jacobs Engineering Co. Houston, Texas (For Pennwalt Corp)
(Name and address of purchaser)

3. Location of installation Greens Bayou Plant Houston, Texas
(Name and address)

4. Type Vertical 1324 --- 2971-1324 --- 1985
(Horse, or vert., tank) (Mfg's serial No.) (CRN) (Drawing) (Mat'l. Id. No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME Boiler and Pressure Vessel Code. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1983
Year

Summer 85 --- Lethal Service (Shell Only)
Addenda (date) Code Case No. Special service per UG 120(d)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or sheets of heat exchangers

6. Shell: SA516-70 .3125" .125" 38" I.D. 5'10"
(Mat'l. Spec No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (Overall) (ft. & in.))

7. Seams: WDB Spot 85% ---
(Long. (Dbl., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (F))

--- WSB Spot 1
(Time) (Grth. (Dbl., Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)

8. Heads: (a) Mat'l. SA-516-70 (Spec. No., Grade) (b) Mat'l. SA-516-70 (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	<u>Top</u>	<u>.3125"</u>	<u>.125"</u>	<u>---</u>	<u>---</u>	<u>2:1</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>concave</u>
(b)	<u>Bottom</u>	<u>.3125"</u>	<u>.125"</u>	<u>---</u>	<u>---</u>	<u>2:1</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>concave</u>

If removable, bolts used (describe other fastenings) ---

(Mat'l. Spec No., Gr., Size No.)

Type of Jacket Fully jacketed SA-516-70 Proof Test ---

10. Jacket Closure 2:1 Elliptical heads If bar, give dimensions 5/16" min. If bolted, describe or sketch.
(Describe as gage & weld, bar, etc.)

11. MAWP 100 & F.V. psi at max. temp. 400 °F. Min. temp. (when less than -20°F) --- °F.
Hydro., pneu., or comb. test press. 150 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: --- --- --- --- ---
Stationary Mat'l. (Spec No., Gr.) (Diam. (in.) (Subject to pressure)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Attach (Welded, Bolted))

--- --- --- --- ---
Floating Mat'l. (Spec No., Gr.) (Diam. (in.)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Attach)

13. Tubes: --- --- --- --- ---
Mat'l. (Spec No., Gr.) (O.D. (in.)) (Nom. Thk. (in. or Gauge)) (Number) (Type (Straight or "U"))

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: SA-240-304L .625" .0625" 34 3/4" I.D. 5'8"
(Mat'l. Spec No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (Overall) (ft. & in.))

15. Seams: WDB Full 100% ---
(Long. (Dbl., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (F))

--- WSB Full 1
(Time) (Grth. (Dbl., Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)

16. Heads: (a) Mat'l. SA-240-304L (Spec. No., Grade) (b) Mat'l. SA-240-304L (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	<u>Top</u>	<u>.6041"</u>	<u>.125"</u>	<u>---</u>	<u>---</u>	<u>2:1</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>concave</u>
(b)	<u>Bottom</u>	<u>.6041"</u>	<u>.125"</u>	<u>---</u>	<u>---</u>	<u>2:1</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>concave</u>

If removable, bolts used (describe other fastenings) ---

(Mat'l. Spec No., Gr., Size No.)

17. MAWP 450 psi at max. temp. 450 °F. Min. temp. (when less than -20°F) --- °F.
Hydro., pneu., or comb. test press. 728 psi.

19. Supports: Skirt yes Lugs --- Legs --- Other --- Attached welded to jacket head
(Yes or no) (No.) (No.) (Describe) (Where and how)

(Name of party, term number, title's name and identifying name)

Item# V-92880

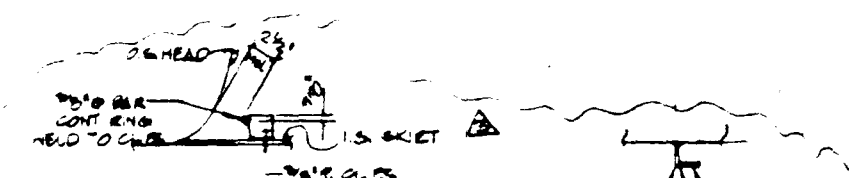
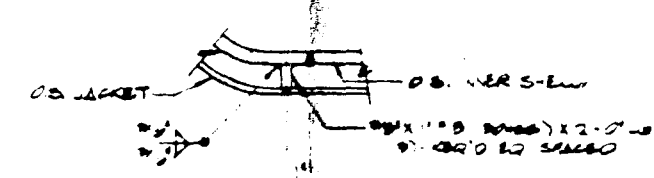
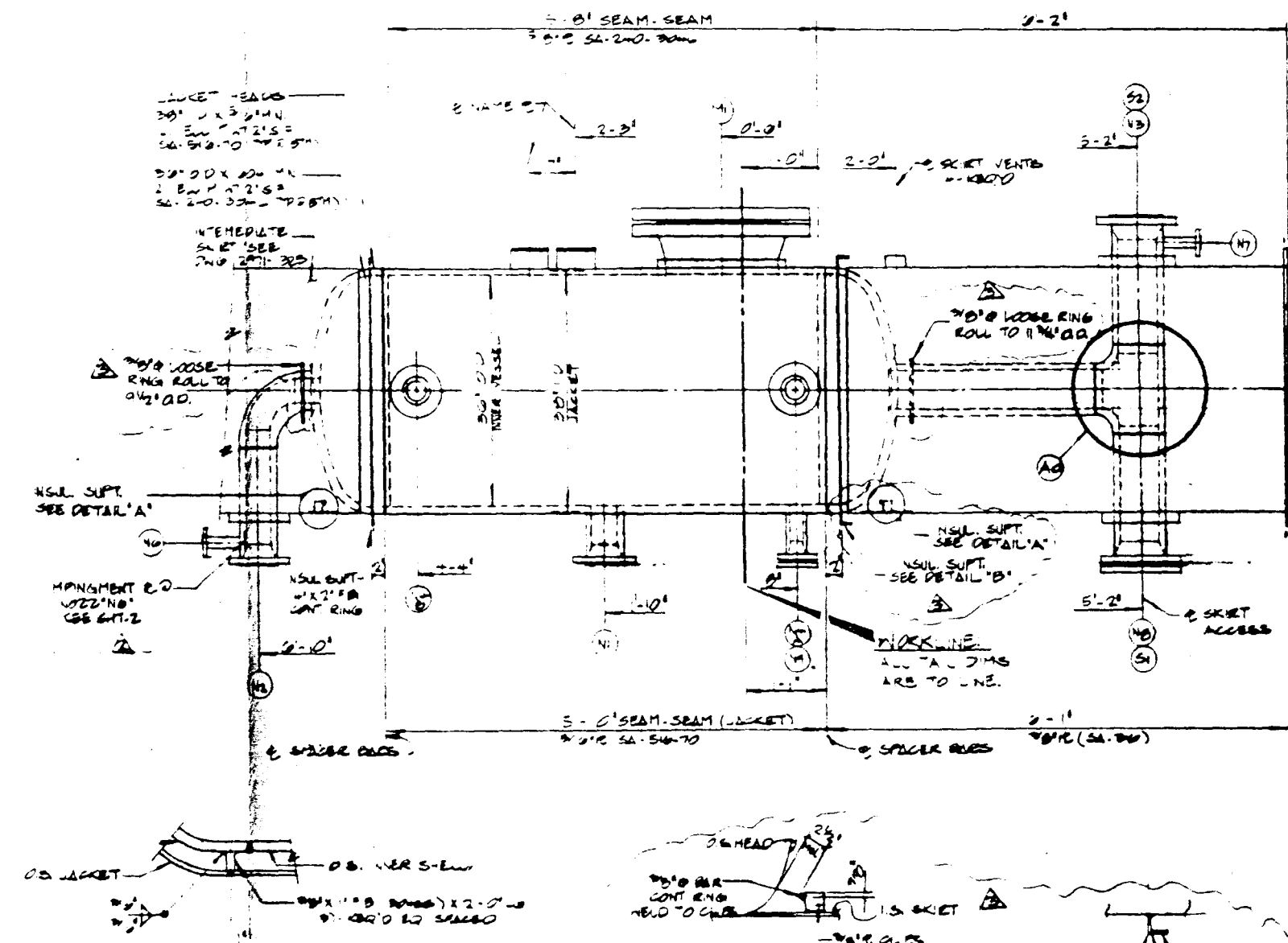
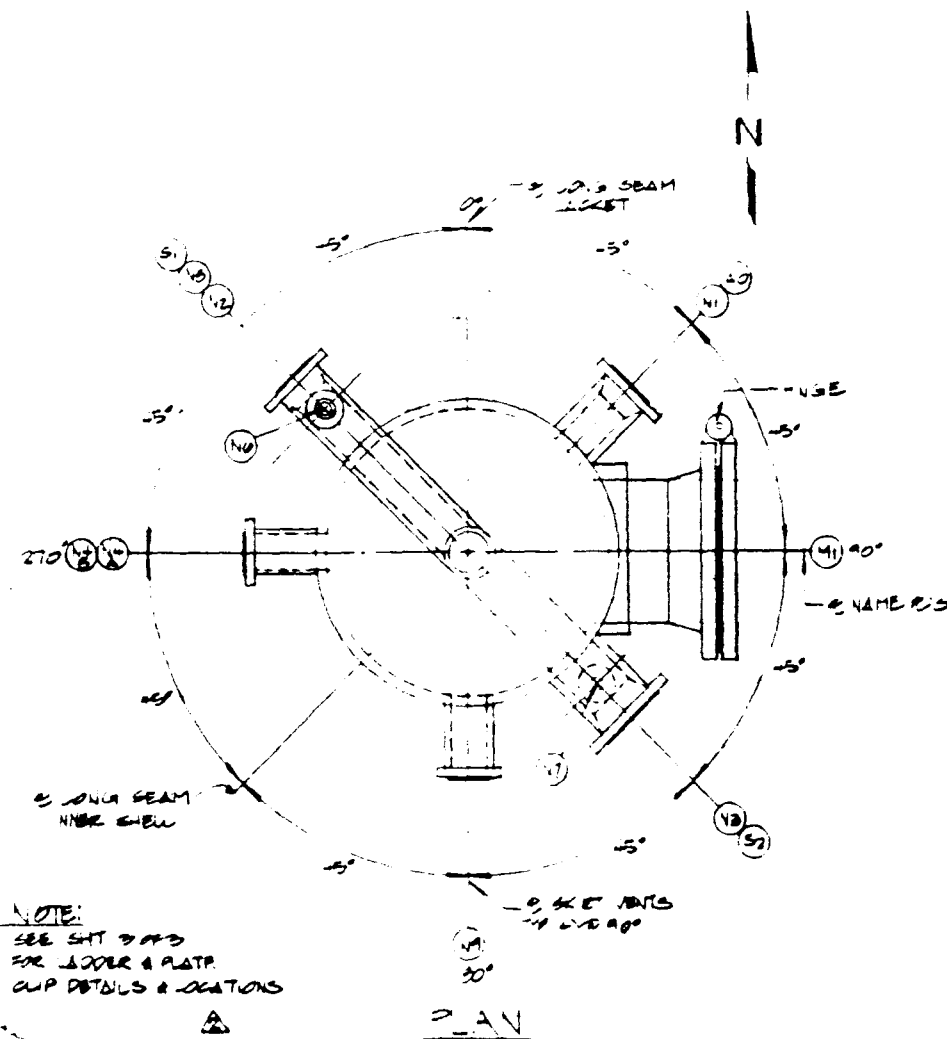
"U" Certificate of Authorization No. 12772 expires 5-14 1986
 Date 12-10-85 Co. name Jett Weld Inc. Signed [Signature]
(Manufacturer) (Representative)

Report on 12-11, 19 85, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12-11-85 Signed J. H. Westmoreland Commissions TX 532
(Authorized Inspector) (Not a Board, State, Province and No.)

"U" Certificate of Authorization No. _____ expires _____, 19____
Date _____ Co. name _____ Signed _____

Date _____ Signed _____ Commissions _____
(Authorized Inspector) (Not Board (incl. endorsement), State, Prov. and Loc.)



NOTE:
SEE SHIT BARS
FOR LADDER & PLAT.
CLIP DETAILS & LOCATIONS

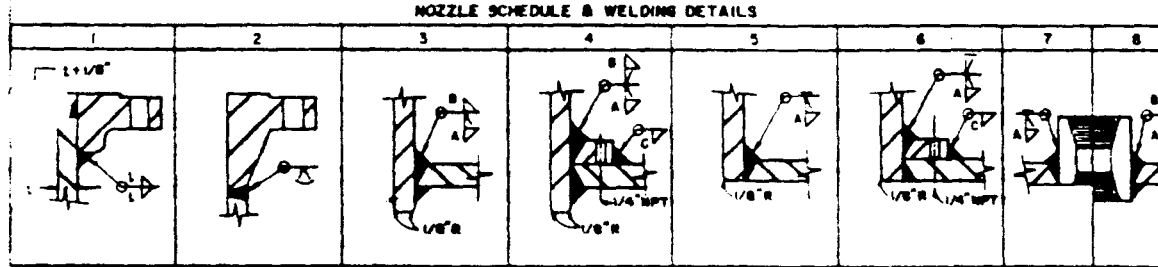
NOTE'S HANG TO HAVE A MIN. 3000' CORE

NO.	SIZE	WELD	TYPE	LOCATION	REMARKS
1	2"	500*	CEMN	MAN-0.5	
2	2"	500*	CEMN	MAN-0.5	
3	2"	500*	CEMN	MAN-0.5	
4	2"	500*	CEMN	MAN-0.5	
5	2"	500*	CEMN	MAN-0.5	
6	2"	500*	CEMN	MAN-0.5	
7	2"	500*	CEMN	MAN-0.5	
8	2"	500*	CEMN	MAN-0.5	
9	2"	500*	CEMN	MAN-0.5	
10	2"	500*	CEMN	MAN-0.5	
11	2"	500*	CEMN	MAN-0.5	
12	2"	500*	CEMN	MAN-0.5	
13	2"	500*	CEMN	MAN-0.5	
14	2"	500*	CEMN	MAN-0.5	
15	2"	500*	CEMN	MAN-0.5	
16	2"	500*	CEMN	MAN-0.5	
17	2"	500*	CEMN	MAN-0.5	
18	2"	500*	CEMN	MAN-0.5	
19	2"	500*	CEMN	MAN-0.5	
20	2"	500*	CEMN	MAN-0.5	

DESIGN DATA
CONSTRUCTION ACCORDING TO ASME CODE SEC VIII DIV 1
CODE STAMP
DESIGN PRESS
MAX ALLOW WORKING PRESSURE
MAX TEST PRESSURE
DESIGN TEMP
SERIAL NO
WEIGHT
EST WEIGHT FULL OF WATER

NAME PLATE DETAIL
NATL NO
ITEM NO
MAX ALLOW WORKING PRESSURE
MAX TEST PRESSURE
DESIGN TEMP
SERIAL NO
WEIGHT
EST WEIGHT FULL OF WATER

NAME PLATE DETAIL
NATL NO
ITEM NO
MAX ALLOW WORKING PRESSURE
MAX TEST PRESSURE
DESIGN TEMP
SERIAL NO
WEIGHT
EST WEIGHT FULL OF WATER



- GENERAL NOTES
- ALL BOLT HOLES TO STRADDLE NORMAL VESSEL CENTERLINES OR THEIR PARALLELS.
 - EACH REINFORCED PAD TO HAVE ONE 1/4" RPT TEST HOLE.
 - ALL MACHINED SURFACES AND THREADED CONNECTIONS TO BE PROTECTED WITH WOOD OR STEEL COVERS.
 - WELD PROCEDURE NO.
 - PAINT COLOR

MATERIAL
SHELL
HEADS
CAST
BOLTING
GASKETS

REVISION
1
2
3
4
5
6
7
8
9
10

JETT WELD INC.
METAL FABRICATORS HOUSTON, TEXAS

CUSTOMER: JACOBS ENG. (FOR PENNALT CORP.)
P.O. BOX 70000, DALLAS, TEXAS 75270
LOCATION: GREENBAY PLANT, HOUSTON, TEXAS

30" O.D. X 5'-0" SEAM-SEAM W/ 38" I.D. JACKET SULFUR SEPARATOR

DATE: 11-1-65
BY: JETT WELD INC.
CHECKED: JETT WELD INC.
APPROVED: JETT WELD INC.