

AUG. 22 1988

Hoechst Celanese
p.o. #042-82044-8
S/O 36401-A
Page 1 of 1

FORM U-2a MANUFACTURERS' PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
as required by the provisions of the ASME Code rules, Section VIII, Division 1

- 1 Manufactured and certified by PEERLESS MFG. CO. #2 1729 S. BROADWAY, CARROLLTON, TX 75006
(name and address of manufacturer)
- 2 Manufactured for Fluor Daniel; P.O. Box 5014; Sugar Land, Texas 77487-5014
(name and address of purchaser)
- 3 Location of installation Celanese; Hwy 60 West; Pampa, Texas 79065
(name and address)
- 4 Type: Horizontal 4426/27/28A X 4B-54866 X 1988
(horiz or vert) (tank) (mfr's serial no of part) (CRN) (drawing no) (Nat'l Bd 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 Code, Section VIII, Division 1: 1986
A 87 X X
(addenda (date)) (Code Case no) (special service per UG-120(d))
- 6 (a) Drawing prepared by Peerless Mfg. Co. (b) Description of part inspected 20"- O-Ring Closure
7 Postweld heat treatment: temperature X °F. Time X
- 8 Shell: SA-105N 2.125 .125 1'- 6" 0'- 11.75" 1
(mat'l spec no grade) (nom thickness (in)) (corr allow (in)) (dia ID (ft & in)) (length (overall) (ft & in)) (no. of courses)
- 9 Seams: X X X X X
(long) (RT) (off (%)) (girth) (RT)
- 10 Heads: (a) SA-516-70N (b) X
(mat'l spec no grade) (mat'l spec no grade)

	Location (top, bottom, end)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (convex or concave)
(a)	End	1.5"	.125"	X	X	2:1	X	X	X	Concave
(b)	X									

If removable, bolts used (describe other fastenings): X

(mat'l spec. no., gr. size no.)

- 11 MAWP 700 at max. temp. 250 Min. temp.: -10 Hydro, pneum., or comb. test press.: X in the X
(psi) (°F) (°F (when less than -20°F)) (psi) (position)

12. Nozzles and inspection openings:

Purpose (inlet, outlet, drain, etc.)	Number	Dia. or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached	Location
X								

- 13 Supports: Skirt X Lugs X Legs X Other X Attached X
14. Remarks: NOTE: Design was proof tested in accordance with ASME SEC.VIII Div. 1, not hydro tested

Item 0-1190P.O. 36401 HSP
P.O. 42-82044-8

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

"U" Certificate of Authorization no 14578 expires April 12, 1990
Date 8-16-88 Name Peerless Mfg. Co. #2 Signed B. H. A. [Signature]
(manufacturer) (representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of Texas and employed by H.S.B. I & I CO. of Hartford, CT. have inspected the pressure vessel part described in this Manufacturers' Data Report on 8-16, 1988 and state that to the best of my knowledge and belief, the manufacturer has constructed this part of a pressure vessel in accordance with the 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 part described in the Manufacturers' 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 8-16, 1988 Signed [Signature] Commissions ND4495 TX397
(Authorized Inspector) (Nat'l Bd (incl. endorsements) state, prov. and no.)

Note: Each additional sheet shall be signed and dated by the certificate holder and the AI.

This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Columbus, OH 43229

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Altered for Single Chamber, Completely Shop Welded Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by Houston Steel Products, Inc., 6100 Romona Blvd., Houston, Texas 77086
(Name and address of manufacturer)

2. Manufactured for Peerless Manufacturing Company, 2811 Walnut Hill Lane, Dallas, Texas 75220
(Name and address of purchaser)

3. Location of installation Hoechst Celanese Plant, Pampa, Texas
(Name and address)

4. Type Pressure Vessel 969-88 252-88 62 1988
(Horia. or vert., tank) (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. 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 1986
Year

to 1987 Addenda
Addenda (Date)

6. Shell: SA-516-70 Norm. 1.25" .125" 4'-6" O.D. 13'-9" Sm/Sm
(Mat'l. Spec. No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. O.D. (ft. & in.)) (Length (overall) (ft. & in.))

7. Seams: Dbl. Butt Full 100% Dbl. Butt Full 2
(Long. (Welded, Dbl., Sngl., Lap, Butt)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F)) (Time (hr)) (Girth (Welded, Dbl., Sngl., Lap, Butt)) (R.T. (Spot, Partial, or Full)) (No. of Courses)

8. Heads: (a) Mat'l. SA-516-70 Norm. (b) Mat'l. SA-516-70
(Spec. No., Grade) (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>Bottom</u>	<u>1.25"</u>	<u>.125"</u>	<u>46.125"</u>	<u>8.875"</u>	<u>2:1</u>				<u>Concave</u>
(b)	<u>Top</u>	<u>1.25"</u>	<u>.125"</u>	<u>46.125"</u>	<u>8.875"</u>	<u>2:1</u>				<u>Concave</u>

If removable, bolts used (describe other fastenings) _____
(Mat'l. Spec. No., Gr., Size, No.)

MAWP 700 psi at max. temp. 130 °F
Min. design metal temp. -10 °F at 700 psi. Hydro., pneu. or comb. test pressure 1050 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
Inlet	1	14"-300#	RFWN	SA-105N/SA-106BN	.593"	SA-516-70	Welded	Shell
Outlet	1	14"-300#	RFWN	SA-105N/SA-106BN	.593"	SA-516-70	Welded	Top Head
Drain	1	2"-300#	RFWN	SA-105N/SA-106BN	.343"		Welded	Bot. Head
Equalizer	1	2"-300#	RFLWN	SA-105N	.655"		Welded	Shell

11. Supports: Skirt Yes Lugs --- Legs --- Other --- Attached Bottom Head; Welded
(Yes or no) (No.) (No.) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: 20" O-Ring Closures - M1, M2 & M3 - Peerless Manufacturing Company "U"
(Name of part, item number, Mfr's name and identifying stamp)

Nozzles continued of Form U-4 Manufacturer's Supplementary Data Report Serial No. 969-88
"Inert Gas Absolute Separator" Item V-1190 P.O. 36401-HSP HSP S/O 252-88

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 19875 expires Nov. 28, 1990.
Date August 19, 1988 Co. name Houston Steel Products, Inc. Signed Jerry Ford
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Houston Steel Products, Inc., at 6100 Romona Blvd., Houston, Texas 77086

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Texas and employed by Delta Lloyds Insurance Company

have inspected the component described in this Manufacturer's Data Report on 8-19, 19 88, 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 this 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 8-24-88 Signed J. H. Whitmore Commissions N.B. #5883
(Authorized Inspector) (Nat'l. Board (incl. endorsements), State, Prov. and No.)

FORM U-1A MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Manufactured and certified by Houston Steel Products, Inc., 6100 Romona Blvd., Houston, Texas 77086
(Name and address of manufacturer)

Manufactured for Peerless Manufacturing Company, 2811 Walnut Hill Lane, Dallas, Texas 75220
(Name and address of purchaser)

Location of Installation Hoechst Celanese Plant Pampa, Texas
(Name and address)

Type Pressure Vessel 969-88 252-88 62 1988
(Horiz., vert., tank, etc.) (Mfr's. serial No.) (CRN) (Dwg.) (Nat'l. Bd. No.) (Year built)

Data Report

Item Number

Remarks

Information continued from Form U-1A Manufacturer's Data Report Serial No. 969-88

Line 10 Nozzles

SH 1 1 1/2"-300# RFLWN SA-105N .625" Welded Shell

SHH 1 1 1/2"-300# RFLWN SA-105N .625" Welded Shell

Diff. Press. 3 1"-300# RFLWN SA-105N .56" Welded Shell

Auto Drain 1 2"-300# RFLWN SA-105N .655" Welded Shell

Access 3 20"-1200# Defined on Form U-2A Welded Shell
Mfgr's Partial Data Report

Item-U-1190

P.O. 36401 HSP

P.O. 42-82044-8

#96556

Date August 19, 1988 Co. name Houston Steel Products, Inc. Signed Jerry Ford
(Manufacturer) (Representative)
Date 8/24/88 Signed J. M. Whitmore Commissions N.B. #5883
(Authorized Inspector) (Nat'l. Board (incl. endorsements), State, Prov., and No.)

96556

U

W

RT-1

NATIONAL PLATE NO. 162

WELDED AND CERTIFIED BY
NATIONAL STEEL PRODUCTS, INC.
HOUSTON, TEXAS

969-88

700

130

1988

1050/FLD.1050

.125

54" O.D.

1.125

1.125" MIN.

36401-HSP

V-1190

54X13-9SM/SM INERT GAS ABSOLUTE

SEPARATOR WT 22,300 LBS S/O 252-88

MIN DES METAL TEMP - 10°F 700PSI

CERTIFIED
PEERLESS MFG.
BY *E. J. Mott*
WELD SYMBOL GENERAL NOTES
1. ALL ROOT GAPS ARE MINIMUM
2. ALL 37° BEVELS ARE MINIMUM

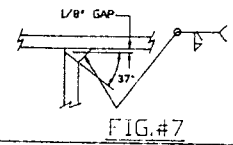
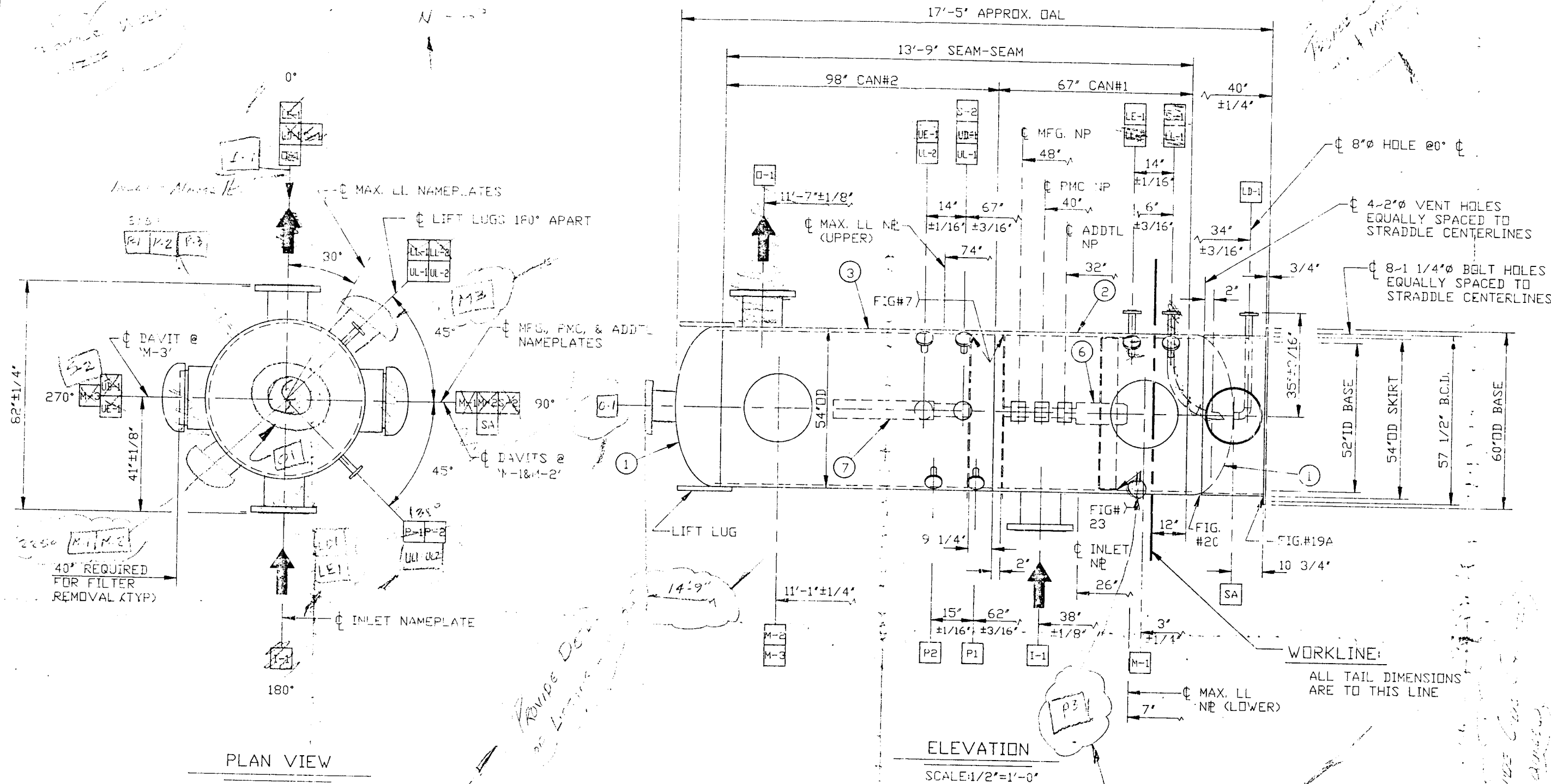
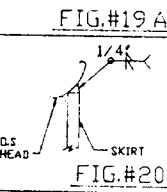
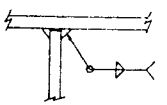


FIG.#23



CONSTRUCTION NOTES:

1. THE FOLLOWING CUSTOMER SPECIFICATIONS APPLY:
SP-610000-42-02, SP-610000-42-04, SP-610000-42-08,
SP-610000-42-10, SP-610000-80-02, SP-610000-99-01,
SP-610000-99-05, CELANESE VENDOR REQUIREMENTS,
ENGINEERING NOTES FOR INERT GAS ABSOLUTE
SEPARATOR, AND FORM HOU-2546 AND VENDOR DATA
SHEET FOR ITEM V-1190

MARK	QTY	SIZE	SERIES	FACE	TYPE	FLG BORE	NOZZ ASSY LGTH	NECK CUT LGTH	SERVICE	O.D.	WALL	WIDTH	TRANS	Q.S.	I.S.	WELD PAD TO SHELL	WELD FIG. NO.	HOLE SIZE	SEE NOTE
SA	1	18"	PIPE						SKIRT ACCESS	18"	.375"								
S-2	1	2"	300#	RF					AUTO-DRAIN										
S-1	1	2"	300#	RF					SYRPHON										
P-2	1	1"	300#	RF					DIFF. PRESS.										
P-1	1	1"	300#	RF					DIFF. PRESS.										
UL-2	1	1 1/2"	300#	RF					GAGE GLASS LSHH										
UL-1	1	1 1/2"	300#	RF					GAGE GLASS										
LL-2	1	1 1/2"	300#	RF					GAGE GLASS										
LL-1	1	1 1/2"	300#	RF					GAGE GLASS										
UE-1	1	2"	300#	RF					EQUALIZER										
LE-1	1	2"	300#	RF					EQUALIZER										
UD-1	1	2"	300#	RF					DRAIN										
LD-1	1	2"	300#	RF					DRAIN										
M-3	1	20"	O-RING CLOSURE						ACCESS										
M-2	1	20"	O-RING CLOSURE						ACCESS										
M-1	1	20"	O-RING CLOSURE						ACCESS										
O-1	1	14"	300#	RF					OUTLET										
I-1	1	14"	300#	RF					INLET										

SCHEDULE OF OPENINGS

MATERIAL SPECIFICATION

THE FOLLOWING MAT'L SPECIFICATIONS APPLY UNLESS OTHERWISE NOTED

FLANGES (ANSI STD) SA-105

COUPLINGS: NONE

REINF. PADS: SA-516-70

NOZZLES: SA-106-B OR

SA-105

STUDS: SA-193, 2H

NUTS: SA-193, 2H

GASKETS: 302-362 302-362

TOLERANCES: 2B-50878

N.B. SER. NO. ITEM NO.

MAX. WORK. PRESS. 700 PSIG @ 130 °F

CORR. ALLOW. 125" YEAR BUILT 1988

MODEL 25-154 C.R.N.

MIN. TEMP. -10 °F @ 0 PSIG FIELD HYDRO

NAMEPLATE STAMPING

NO. OF VESSELS REQ'D ONE

EST. SHIPPING WT. 22,300 LBS

PEERLESS MANUFACTURING CO.

DALLAS, TEXAS

PROPERTY OF PEERLESS MFG. CO. & NOT TO BE REPRODUCED OR USED WITHOUT THEIR PERMISSION

CUSTOMER: FLUOR DANIEL, INC.

CUSTOMER REFERENCE DATA

P.O. NO. 42-82044-8

JOB NO. 42-82044-8

ITEM NO. V-1190

TITLE 54"OD - 700 PSIG VERTICAL ABSOLUTE SEP.

PAMPA, TEXAS

DRAWN BY SN DATE 6/23/88 CHK BY DJF DATE 6/28/88

REV. NO. S/O 36401-A

REV. NO. 6B-54814

ITEM	QTY	DESCRIPTION	MAT'L
1	2	54"OD X HEAD WITH 2' S.F.	SA-516-70
2	1	54"OD ROLLED CYL. X 67'LG	SA-516-70
3	1	54"OD ROLLED CYL. X 98'LG	SA-516-70
SUPPLIED BY PMC			
6	1	DRY SCRUBBER BUNDLE WITH(25) 4' TUBES (C.S.)	
7	1	FILTER BUNDLE WITH (40) 5 1/2" X 36"LG ABSOLUTE FILTERS	
8	1	EACH PMC AND INLET NAMEPLATES	
9	2	MAX LL NAMEPLATES	
10	3	20" O-RING CLOSURES	
ADDITIONAL MATERIAL SPECIFICATION SHOWN BELOW			

DESIGN DATA
CONSTRUCTION: ASME CODE (1986 ED.) SECT. VIII DIV. 1
1987 ADDENDA

STAMP REQ'D: YES NO NATIONAL BOARD REGISTER

MAXIMUM ALLOWABLE WORKING PRESSURE 700 PSIG AT 130 °F

CORR. ALLOW. 125" POST WELD HEAT TREAT YES NO

RADIOGRAPHIC EXAM FULL PER UW-11 (a)

LONGITUDINAL JOINT EFFICIENCY 100 %

PAINT: INTERNAL NONE EXTERNAL SEE SPEC 610000-80-2

HYDRO. TEST PRESS 100 PSIG

INSULATION CONSTRUCTION DATA

1. ALL FLANGE BOLT HOLES WILL STRADDLE NORMAL VESSEL OR NOZZLE CENTER LINES AS APPLICABLE UNLESS OTHERWISE NOTED.

2. EACH REINFORCING PAD OR SEGMENT THEREOF SHALL HAVE ONE 1/4"NPT TELLTALE HOLE.

3. THE WELDING IN PLACE OF ALL OPENINGS WILL BE DONE IN SUCH A MANNER AS TO MINIMIZE FLAT OR DISTORTED AREAS IN THE HEAD OR SHELL.

4. THE VESSEL SHALL BE CLEANED INSIDE AND OUTSIDE IN ACCORDANCE WITH PEERLESS SPEC. CS-6-1

5. DIMENSIONAL TOLERANCES ARE AS SHOWN, IN THE CASE OF NO TOLERANCE BEING SHOWN, THE SHOP SHALL USE TOLERANCE DRAWING LISTED IN REFERENCE DRAWINGS.

NAT'L. BD. NO. SER. NO. W-591

CERTIFIED BY: S/O 36401-A

PEERLESS MFG. CO.

O-RING RPL P/N 61-004-011

ELEM. RPL. NO. 31-042-012 QTY 40

MAX. WORK. PRESS. 700 PSIG @ 130 °F

CORR. ALLOW. 125" YEAR BUILT 1988

MODEL 25-154 C.R.N.

MIN. TEMP. -10 °F @ 0 PSIG FIELD HYDRO

NAMEPLATE STAMPING

NO. OF VESSELS REQ'D ONE

EST. SHIPPING WT. 22,300 LBS

PEERLESS MANUFACTURING CO.

DALLAS, TEXAS

PROPERTY OF PEERLESS MFG. CO. & NOT TO BE REPRODUCED OR USED WITHOUT THEIR PERMISSION

CUSTOMER: FLUOR DANIEL, INC.

CUSTOMER REFERENCE DATA

P.O. NO. 42-82044-8

JOB NO. 42-82044-8

ITEM NO. V-1190

TITLE 54"OD - 700 PSIG VERTICAL ABSOLUTE SEP.

PAMPA, TEXAS

DRAWN BY SN DATE 6/23/88 CHK BY DJF DATE 6/28/88

REV. NO. S/O 36401-A

REV. NO. 6B-54814