

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

118

1. Manufactured and certified by SMITHCO Engineering, Inc., 6211 S. 39th W. Ave., Tulsa, OK 74132  
(Name and address of manufacturer)  
2. Manufactured for Schedule A, Inc. Houston, Texas 77036  
(Name and address of purchaser)  
3. Location of installation SCHEDULE A, INC. Gulf Plains Plant  
(Name and address)  
4. Type Horiz(Non-Cir) 97B-2681-A 97B-2681 7480 1998  
(Identify as per tank) (Mfr's serial No.) (CRN) (Drawing No.) (Mfr's 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 1995  
Year

6. Shell: Tube A Plug Sheets: SA-516 GR-70 N Fr 1.250/Bk 1.250 0625 Fr 1' 0.8125/Bk 1' 0.8125" 12' 6.3750"  
(Mat. Spec. No. Grade) (Nom. Thk. (in.)) (Cor. Allow. (in.)) (Diam. I.D. (ft. x in.)) (Length (ft. x in.))  
7. Seams: Corner Joint 100 1100 90min  
(Type, Location, etc.) (RT, (Spec. or Full)) (E.R.S.) (HT Temp. (°F)) (Time (hr))  
8. Heads: (a) Matl. (a) Covers: SA-516 GR-70 N (b) Matl. (b) Ends: SA-516 GR-70 N  
(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	Spec. to Pressure (Diameter or Conical)
(a)	Fr/Bk	1.250/1.250	0625	--	--	--	--	--	12.4375/12.4375 x 150.3750	Flat
(b)	Fr/Bk	500/500	0625	--	--	--	--	--	12.4375/12.4375 x 9.3750/9.3750	Flat

If removable bolts used (describe other fastenings) N/A  
(Matl. Spec. No. Gr. Size No.)

9. MAWP 300 psi at max. temp 250 °F  
Min. design metal temp. -20 °F at 300 psi. Hydro., pneu., or comb. test pressure 450 psi

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached	Location
Inlet/Outlet	2/2	14" 300/80	RFWN	SA-105/SA-106B	.750	Integral	UW-16.1(a)	Fr/Bk Head
Vent/Drain	2	1.0	6000CPLG	SA-105		Integral	UW-16.1(a)	Fr/Bk Head
Temp/Press	4	.75/.75	6000CPLG	SA-105		Integral	UW-16.1(a)	Fr/Bk Head

11. Supports: Skirts No Lugs No Legs 4 Other Attached Welded to covers  
(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:  
Flanged Nozzle, 980819 - 1, 2, 3, 4, Lewis Industries Corp., "U"  
(Name of part, item number, Mfr's name and identifying stamp)

Impact testing exempt per: UCS-66(a), UCS-66(b), UCS-66.1, UG-20(f) Item: D2.0156 Service: BOOSTER CLR  
Tie Bar: Front(4)SA-516 GR-70 .5000 x .0625 x 12.5000 x 3.7500 Tie Bar: Back(4)SA-516 GR-70 .5000 x .0625 x 12.5000 x 3.7  
Tubes: SA-214 WLD- 323 x 1.00" x .060" x 32.0000'-Straight  
Constructed in conformance with appendix 28

**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. 4175 expires February 28th 2000  
Date 03-09-98 Co. name SMITHCO Engineering, Inc. Signed [Signature]  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP INSPECTION**

Vessel constructed by SMITHCO Engineering, Inc. at Tulsa, Oklahoma  
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Province of Oklahoma and employed by Arkwright Mutual Insurance Company of MA  
have inspected the component described in this Manufacturer's Data Report on 3-19 19 98, 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 loss of any kind arising from or connected with this inspection.  
Date 3-19-98 Signed [Signature] Commissions NB7003.A.OK355  
(Authorized Inspector) (Nat'l Board (incl. endorsements), State, Prov. and No.)

FORM U-2A MANUFACTURER'S 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

7480 2/8

1. Manufactured and certified by **LEWIS INDUSTRIES CORPORATION, 816 N. 5TH ST., COLLINSVILLE, OK 74021**  
(Name and address of Manufacturer)
2. Manufactured for **SMITHCO ENGINEERING INC., 6312 S. 39TH W. AVE., TULSA, OK 74131**  
(Name and address of Purchaser)
3. Location of installation **UNKNOWN**
4. Type: **FLANGED NOZZLE** **980819 1 THRU 4**  
(Description of vessel part (shell, two piece head, tube bundle)) (Mfg. serial No.)  
**N/A** **97B2681** **SMITHCO ENGINEERING INC.**  
(Net T. Bd. No.) (Drawing No.) (Drawing prepared by)  
5. ASME Code, Section VIII, Div. 1 **1995 ED, 1996 ADD.** **N/A** **1998**  
(Edition and Addenda (date)) (Code Case No.) (Year built)  
6. Shell (a) No. of course(s): **N/A** (b) Overall length (ft & in.): **N/A**  
(Special Service per UG 120(d))

Course(s)			Material	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B. & C)			Heat Treatment					
No.	Diameter, in.	Length, ft & in.	Spec./Grade or Type	Nom.	Corr.	Type	Full.	Spot.	None	Eff.	Type	Full.	Spot.	None	Eff.	Temp.	Time
	N/A																
	N/A																
	N/A																

7. Heads: (a) **NONE** (b) **NONE**  
(Met'l Spec. No., Grade or Type) H.T. - Time & Temp. (Met'l Spec. No., Grade or Type) H.T. - Time & Temp.
- |     | Location (Top, Bottom, End) | Thickness |       | Radius |         | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diameter | Side to Pressure |         | Category A |       |       |      |      |
|-----|-----------------------------|-----------|-------|--------|---------|------------------|--------------------|----------------------|---------------|------------------|---------|------------|-------|-------|------|------|
|     |                             | Min.      | Corr. | Crown  | Knuckle |                  |                    |                      |               | Convex           | Concave | Type       | Full. | Spot. | None | Eff. |
| (a) | N/A                         |           |       |        |         |                  |                    |                      |               |                  |         |            |       |       |      |      |
| (b) | N/A                         |           |       |        |         |                  |                    |                      |               |                  |         |            |       |       |      |      |

- If removable, bolts used (describe other fastening) **NONE**  
(Indicate yes or no and the component(s) impact tested)
8. MAWP **N/A** **N/A** psi at max. temp. **N/A** **N/A** °F. Min. design metal temp. **N/A** °F at **N/A** psi.  
(Internal) (external) (internal) (external)

9. Impact test **N/A**  
(Indicate yes or no and the component(s) impact tested)
10. Hydro., pneu., or comb. test press. **NONE** Proof test **NONE**

11. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
IN OR OUT	4	14"300#	RFWN	SA106B	SA105	.750	0	WELD	WELDED	WELDED	FLANGE
TEMP/PRESS	4	3/4"	CPLG		SA105	6000#	0	WELD	WELDED	WELDED	NOZZLE

12. Supports: Skirt **NO** Lugs **0** Legs **0** Others **NONE** Attached **NONE**  
(Yes or no) (No.) (No.) (Describe) (Where and how)
13. Remarks: **1) OAL OF FLANGE AND NOZZLE (4)-9 3/8"**  
**2) NO DESIGN FUNCTION PERFORMED BY LEWIS INDUSTRIES CORPORATION**  
**3) CERTIFIED TO MATERIAL AND WORKMANSHIP ONLY**

CERTIFICATE OF SHOP/FIELD COMPLIANCE

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

U Certificate of Authorization No. **24,989** Expires **AUGUST 3** 19 **99**  
Date **02/25/98** Name **LEWIS INDUSTRIES CORPORATION** Signed **Paul K. Robinson**  
(Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

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 **OK** and employed by **OLD REPUBLIC INSURANCE COMPANY** of **DALLAS, TEXAS** have inspected

the pressure vessel part described in this Manufacturer's Data Report on **02/25**, 19 **98**, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part 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 part 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 **02/25/98** Signed **Michael R. Pope** Commissions **OK572**  
(Authorized Inspector) (Net'l Board incl. endorsement. State, Province and No.)