

## TAKEN FROM MASTER DATA REPORT BY NATIONAL BOARD

**FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
**As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 P.O. #BR7024895**

1. Manufactured and certified by SISTERSVILLE TANK WORKS, INC., 1942 MCCOY ST., SISTERSVILLE, WV 26175  
(Name and address of Manufacturer)
2. Manufactured for LUCITE INTERNATIONAL, 6350 NORTH TWIN CITY HIGHWAY, NEDERLAND, TX 77627  
(Name and address of Purchaser)
3. Location of installation LUCITE INTERNATIONAL, 6350 NORTH TWIN CITY HIGHWAY, NEDERLAND, TX 77627  
(Name and address)
4. Type: HORIZONTAL HEAT EXCHANGER 06-290  
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Mfr's serial No.)  
X 06-289, 06-290 REV. 1 3879 2007  
(CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)
5. ASME Code, Section VIII, Div. 1 2004 ED. 2005 ADD. X X  
(Edition and 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, shell of heat exchangers, or chamber of multichamber vessels.

6. Shell (a) No. of course(s): 3 (b) Overall length (ft & in.): 19' 9"

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
1	2 1/2" OD	3' 9"	SA240-316L	.250	0	1	SPOT	85%	1	SPOT	85%	X	X
2	2 1/2" OD	8'	SA240-316L	.250	0	1	SPOT	85%	1	SPOT	85%	X	X
3	2 1/2" OD	8'	SA240-316L	.250	0	1	SPOT	85%	1	SPOT	85%	X	X

7. Heads: (a) X (b) X  
(Mat'l Spec. No., Grade or Type) (H.T. — Time & Temp.) (Mat'l Spec. No., Grade or Type) (H.T. — Time & Temp.)

	Location (Top, Bottom, Ends)	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)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X

If removable, bolts used (describe other fastening) X  
(Mat'l Spec. No., Grade, size, No.)

8. Type of jacket X Jacket closure X  
(Describe as ogee & weld, bar, etc.)  
 If bar, give dimensions X If bolted, describe or sketch.

9. MAWP 150 X psi at max. temp. 320 X °F Min. design metal temp. 20 °F at 150 psi.  
(internal) (external) (internal) (external)

10. Impact test NO - EXEMPT PER UHA-51(d) at test temperature of X °F.  
(Indicate yes or no and the component(s) impact tested)

11. Hydro., ~~hydrostatic~~ test press. 200 PSIG Proof test X

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA240-316L 25 3/4" 1 1/2" NONE WELDED  
(Stationary (Mat'l Spec. No.)) (Dia., in. (subject to press.)) (Nom. thk., in.) (Corr. Allow., in.) (Attachment (welded or bolted))  
X X X X X  
(Floating (Mat'l Spec. No.)) (Dia., in.) (Nom. thk., in.) (Corr. Allow., in.) (Attachment)
13. Tubes: SA240-316L TYPE 2 CAT. III 3/4" 16 BWG 190 STRAIGHT  
(Mat'l Spec. No., Grade or Type) (O.D., in.) (Nom. thk., in. or gauge) (Number) (Type (Straight or U))

Items 14-18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of course(s) 2 (b) Overall length (ft & in.): 1' 8 3/4"

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
1	21 1/2" OD	1' 2 3/8"	SA240-316L	.250	0	1	SPOT	85%	1	SPOT	85%	X	X
2	21 1/2" OD	6 3/4"	SA240-316L	.250	0	1	SPOT	85%	1	SPOT	85%	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X

15. Heads: (a) SA240-316L (b) SA240-316L  
(Mat'l Spec. No., Grade or Type) (H.T. — Time & Temp.) (Mat'l Spec. No., Grade or Type) (H.T. — Time & Temp.)

	Location (Top, Bottom, Ends)	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)	END	.250	0	21" ID	1.50	X	X	X	X	X	YES	X	NONE	85%
(b)	END	.250	0	21" ID	1.50	X	X	X	X	X	YES	X	NONE	85%

If removable, bolts used (describe other fastening) SA193-B7 3/4" X 6 1/8" LG. (64) BOLTS, SA194-2H, 3/4" (128) HHH NUTS  
(Mat'l Spec. No., Grade, size, No.)

## FORM U-1 (Back)

16. MAWP 150 X psi at max. temp. 305 X °F. Min. design metal temp. 20 °F at 150 psi.  
(internal) (external) (internal) (external)

17. Impact test NO- EXEMPT PER UHA-51(d) at test temperature of X °F.  
(Indicate yes or no and the component(s) impact tested)

18. Hydro. XXXXXXX test press. 200 PSIG Proof test X

19. 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	
VENT, DRAIN	2	1"150#	RFWN	SA312-316LSA182-316L	133	0		X	WELDED	WELDED	X
INLET, OUTLET	4	3"150#	RFWN	SA312-316LSA182-316L	215	0		X	WELDED	WELDED	X
X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X

- \* 20. Supports: Skirt NO Lugs 2 Legs X Others (6) SADDLES\* Attached SHELL (WELDED)  
(Yes or no) (No.) (No.) (Describe) (Where and how)
21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: (List the name of part, item number, mfr.'s name and identifying number)  
NONE / INSPECTION OPENINGS OMITTED PER UG46(a)  
E-205B AMMONIA STRIPPER BOTTOMS/PHOSPHATE STRIPPER FEED EXCHANGER. SER. NO. 06-290
22. Remarks: E-205A AMMONIA STRIPPER BOTTOMS/PHOSPHATE STRIPPER FEED EXCHANGER SER. NO. 06-289  
(2) BODY FLGS. TUBESIDE SA182-316L EACH UNIT: 2 1/4" thk. x 25 3/4" OD  
\*(4) SADDLES SER. NO. 06-289 (2) SADDLES SER. NO. 06-290  
OVER PRESSURE PROTECTION PROVIDED BY OTHERS.

## CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements 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. 490 Expires 2-28-2009

Date 3-1-07 Name SISTERSVILLE TANK WORKS, INC. Signed Rick Henderson  
(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/or the State or Province of WV and employed by HSB CT of HARTFORD, CT

have inspected the pressure vessel described in this Manufacturer's Data Report on 3-1-07, 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 3-1-07 Signed Arthur J. Profane Commissions NB8153AB WV1802  
(Authorized Inspector) (Nat'l Board incl. endorsements, State, Province, and No.)

## CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1. U Certificate of Authorization No. \_\_\_\_\_ Expires \_\_\_\_\_.

Date \_\_\_\_\_ Name \_\_\_\_\_ Signed \_\_\_\_\_  
(Assembler) (Representative)

## CERTIFICATE OF FIELD ASSEMBLY 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 \_\_\_\_\_ and employed by \_\_\_\_\_

of \_\_\_\_\_, have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items \_\_\_\_\_, not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with the ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of \_\_\_\_\_ psi. 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 \_\_\_\_\_ Signed \_\_\_\_\_ Commissions \_\_\_\_\_  
(Authorized Inspector) (Nat'l Board incl. endorsements, State, Province and No.)