

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

1. Manufactured and certified by GASPAR, INC 1545 WHIPPLE AVE. S.W. CANTON, OHIO 44710  
 (Name and address of Manufacturer)

2. Manufactured for TATE & LYLE SINGAPORE PTE. LTD 2200 E. ELDORADO STREET DECATUR, IL 62521  
 (Name and address of Purchaser)

3. Location of Installation UNKNOWN  
 (Name and address)

4. Type: HORIZONTAL ORGANICS HEATER 33351A  
 (HORIZ., vert., or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.)

----- 33351 REV.5 2129 2005  
 (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 2004 EDITION -----  
 [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): (1) ONE (b) Overall length (ft & in.): 19' - 8"

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	14" OD	19' - 8.0"	SA106-B	.375	.125	S	NONE	100	7	NONE	---	----	----

7. Heads: (a) ----- (b) -----  
 (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)														
(b)														

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

(Mat'l Spec. No., Grade, size, No.)

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

9. MAWP 123 15 psi at max. temp. 350 350 °F Min. design metal temp. -20 °F at 123 psi.  
 (Internal) (external) (Internal) (external)

10. Impact test NO. CHARPY IMPACT TEST EXEMPT PER UG-20(f) at test temperature of ----- °F.  
 [Indicate yes or no and the component(s) Impact tested]

11. Hydro., pneu., or comb. test press. HYDROSTATIC 160 Proof test -----

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA516-70\* 15.125 1.75 .125 WELDED  
 [Stationary (Mat'l Spec. No.)] [Dia., in. (subject to press.)] (Nom. thk., in.) (Corr. Allow., in.) [Attachment (welded or bolted)]

[Floating (Mat'l Spec. No.)] (Dia., in.) (Nom. thk., in.) (Corr. Allow., in.) (Attachment)  
SB626-N10276 .750 .065 96 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) TWO (b) Overall length (ft & in.): 2' - 0"

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	14" OD	1' - 2.0"	SB575-N10276	.1875	0	1	FULL	100	----	-----	---	----	----
1	14" OD	0' - 10.0"	SB575-N10276	.1875	0	1	FULL	100	----	-----	---	----	----

15. Heads: (a) SA105 w/ 3/8" THK FACER (SB575-N10276) (b) SA105 w/ 3/8" THK FACER (SB575-N10276)  
 (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)	ENDS	1.38	0	----	----	---	----	----	21"	----	----	---	----	----
(b)	ENDS	1.38	0	----	----	---	----	----	21"	----	----	---	----	----

If removable, bolts used (describe other fastening) (24) 1" STUDS SA193-B7 (48) 1" NUTS SA194-2H

(Mat'l Spec. No., Grade, size, No.)



## FORM U-1 (Back)

16. MAWP 123 15 psi at max. temp. 350 350 °F. Min. design metal temp. -20 °F at 123 psi.  
(internal) (external) (internal) (external)

17. Impact test NO, CHARPY IMPACT TEST EXEMPT PER UG-20(f), UNF-65, UCS-66(a). at test temperature of ---- °F.

(Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. HYDROSTATIC 160

Proof test ----

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	
INLET	1	6"	150#SO	SA106-B	SA105	.280	.125	----	(c)	(k)	----
OUTLET	1	2"	150#SO	SA106-B	SA105	.344	.125	----	(c)	(k)	----
INLET/OUTLET	2	2"	150#LJ	SB619-N10276	SA105	.154	0	----	(c)	----	----
VENT/DRAIN	2	3/4"	150#LJ	SB619-N10276	SA105	.113	0	----	(c)	----	----

20. Supports: Skirt NO Lugs 2 Legs 2 Others ---- 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, mfg's. name and identifying number)

22. Remarks: UG-46(a).

ITEM 12: \*TUBESHEETS HAVE A 3/8"THK x 17-1/4"DIA. FACER (SB575-N10276).

3/8"THK FACERS MEET THE REQUIREMENTS OF UCL-23(a).

### 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. 16862

Expires JULY 25

2008

Date 11-29-05

Name GASPAR, INC.

Signed

Wesley Morgan  
(Representative)

(Manufacturer)

### 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 Ohio and employed by OneBeacon American Insurance Company of Boston, Mass. have inspected the pressure vessel described in this Manufacturer's Data Report on 11-29-2005, 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 11-29-2005

Signed

[Signature]  
(Authorized Inspector)

Commissions

NB-9838B/N PA-2646 OHIO COMM

(Nat'l Board incl. endorsement, 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 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. endorsement, State, Province and No.)