

E507

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 AMBASSADOR HEAT TRANSFER COMPANY, 10080 ALLIANCE ROAD, CINCINNATI, OHIO 45242
2. Manufactured for CROWN IRON WORKS, ROSEVILLE, MN 55113
3. Location of installation UNKNOWN
4. Type: VERTICAL HEAT EXCHANGER
5. ASME Code, Section VIII, Div. 1 2004 EDITION, 2005 ADDENDA

Items 6 - 11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.
6. Shell (a) No. of course(s): ONE (b) Overall length (ft & in.): 19'-9 1/4"

Table with columns: Course(s), Material, Thickness, Long Joint (Cat. A), Circum. Joint (Cat. A, B & C), Heat Treatment. Row 1: 1, 12 3/4" OD, 19'-9 1/4", SA53B, 0.375, .0625, E, NONE, 85%, -

7. Heads: (a) (b)
Table with columns: Location (Top, Bottom, Ends), Thickness, Radius, Elliptical, Conical, Hemispherical, Flat, Side to Pressure, Category A.

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.)

9. MAWP 165 psi at max. temp. 400 °F Min. design metal temp. 50 °F at 165 psi

10. Impact test EXEMPT PER UG-20f, UCS-66c at test temperature of °F

11. Hydro., pneu., or comb. test press. 250 Psig. Proof test

12. Tubesheet: SA240 F304/304L 12" 1 1/4" 0 WELDED
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)

13. Tubes: SA249 TP304L 3/4" 0.065" 114 STRAIGHT
Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment
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): (b) Overall length (ft & in.):

Table with columns: Course(s), Material, Thickness, Long Joint (Cat. A), Circum. Joint (Cat. A, B & C), Heat Treatment. Row 1: -

15. Heads: (a) SA403-304/304L (b) SA403-304/304L
Table with columns: Location (Top, Bottom, Ends), Thickness, Radius, Elliptical, Conical, Hemispherical, Flat, Side to Pressure, Category A.

If removable, bolts used (describe other fastening) SA193 B7, SA194 GR.2H (24) 5/8" DIA.
(Mat'l Spec. No., Grade, Size, No.)

16. MAWP 165 (Internal) - (external) psi at max. temp. 400 (Internal) - (external) °F Min. design metal temp. -20 °F at 165 psi.

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

18. Hydro., pneu., or comb. test press. 262 psig. 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	
STEAM IN	1	4"	150RF	SA106 B	SA105	0.237"	0.0625	-	welded	Welded	Shell
COND. OUT	1	4"	150RF	SA106 B	SA105	0.237"	0.0625	-	welded	Welded	Shell
INLET/OUTLET	2	6"	150RF	SA312TP304L	SA182 F304L	0.134"	0	-	welded	Welded	Bonnet
VENT	1	3/4"	NPT	-	SA105	3000#	0	-	welded	Welded	Shell
-	-	-	-	-	-	-	-	-	-	-	-

20. Supports: Skirt NO Lugs 2 Legs - Others - Attached welded to shell  
(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: (2) 1 1/4" THK. SA240-304/304L Flanges Welded To Bonnet Head for bolting attachment of bonnets.

User To Install Over Pressure Protection Prior To Use Per UG-125  
ITEM NO. E-507

**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. 27460 Expires 12/20/08

Date 5/10/07 Name Ambassador Heat Transfer Company Signed [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 OHIO and employed by HSB - CT of CT have inspected the pressure vessel described in this Manufacturer's Data Report on 5-10-2007, 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 5-10-2007 Signed [Signature] Commissions MB10501A-014260  
(Authorized Inspector) (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 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.)