

FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS

as required by the provisions of the ASME Code rules, Section VIII, Division 1

#103254

American Heat Reclaiming, Div. of Alfa-Laval, Inc.

1. Manufactured and certified by Hanna St., Lykens, PA 17048

(name and address of manufacturer)

2. Manufactured for Lumus Crest, Inc.

Bloomfield, New Jersey

(name and address of purchaser)

3. Location of installation Tennol Energy Company

Jasper, Tennessee

(name and address)

4. Type: Horiz.

(horiz. or vert. tank)

18229

(mfr's serial no.)

(CRN)

18229

(drawing no.)

13862

(Nat'l. Bd. no.)

1987

(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

(year)

(addenda (Date))

(Code Case no.)

(special service per UG-120(d))

Items 6-11 inclusive to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

6. Shell: SA-240, 316

(mat'l. spec. no., grade)

.25"

(nom. thickness (in.))

NA

(corr. allow. (in.))

4' 11-1/2" O.D.

(dia. ID (ft. & in.))

8' 0"

(length (overall) (ft. & in.))

7. Seams: *

(long. dbl., angl.)

NA

(RT (spot or full))

55

(eff. (%))

(HT temp. (°F))

(time)

(girth (dbl., angl.))

(RT (spot, partial, or full))

(no. of courses)

8. Heads: (a) SA-516, 70/Faced with SA-240, 316

(mat'l. spec. no., grade)

(b) SA-516, 70/Faced with SA-240, 316

(mat'l. 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>C-End</u>	<u>2.58"</u>	<u>NA</u>						<u>61"</u>	<u>Flat</u>
(b)	<u>H-End</u>	<u>2.58"</u>	<u>NA</u>						<u>61"</u>	<u>Flat</u>

If removable, bolts used (describe other fastenings): SA-193, B7 (40) 1"D. ea. hd.

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

9. Type of jacket: _____

Proof test: _____

10. Jacket closure: _____

(describe as open & weld, bar, etc.)

If bar, give dimensions: _____

If bolted, describe or sketch.

11. MAWP 125

(psf)

at max. temp. 250°

(°F)

Min. temp.: _____

(°F when less than -20°F)

Hydro., pneum. or comd. test press.: _____

190

(psf)

Items 12 and 13 to be completed for tube sections.

12. Tubesheets: _____

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

(dia. (in.) (subject to pressure))

(nom. thickness (in.))

(corr. allow. (in.))

(attachment (welded, bolted))

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

(dia. (in.))

(nom. thickness (in.))

(corr. allow. (in.))

(attachment)

13. Tubes: _____

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

(OD (in.))

(nom. thickness (in. or gauge))

(no.)

(type (straight or U))

Items 14-17 inclusive to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell: _____

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

(nom. thickness (in.))

(corr. allow. (in.))

(dia. ID (ft. & in.))

(length (overall) (ft. & in.))

15. Seams: _____

(long. dbl., angl.)

(RT (spot or full))

(eff. (%))

(HT temp. (°F))

(time)

(girth (dbl., angl.))

(RT (spot, partial, or full))

(no. of courses)

16. Heads: (a) _____

(mat'l. spec. no., grade)

(b) _____

(mat'l. 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)										
(b)										

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

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

17. MAWP 125

(psf)

at max. temp. 250°

(°F)

Min. temp.: _____

(°F when less than -20°F)

Hydro., pneum. or comd. test press.: _____

190

(psf)

Items on reverse side to be completed for all vessels where applicable.

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.

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FORM U-1 (back)

18. Nozzles, inspection and safety valve openings:

[illegible]

19. Supports: Skirt _____ Lugs _____ Legs _____ Other _____ Brackets _____ Attached _____ Welded to Shell _____
(yes or no) (no.) (no.) (describe) (where and how)

20. Remarks: Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: _____

(name of part, item number, mfr's. name, and identifying stamp)

Hydro-tested per UG 99(b). Vessel is a Spiral Heat Exchanger.

*No seams in outer shell. Hoop load transferred by braces.

Both covers P.W.H.T. per Table UCS-56.

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. 1793 expires March 30, 1990

Date 5-4-87 Name Amer. Heat Recl., Div. of Alfa-Laval, Inc. Signed [Signature]
(manufacturer)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by American Heat Reclaiming, Div. of Alfa-Laval, Inc. at Hanna St., Lykens, PA
I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or province of Penna. and employed by Commercial Union Insurance Company

_____ of Boston, Mass., have inspected the pressure vessel described in this Manufacturers' Data Report on 4-27, 19 87, 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 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 5-4-87 Signed Richard H. Myers Commissions NB-7967 & PA.WC-2516

(Net'l. Bd. (incl. endorsements) state, prov. and no.;

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME BOILER AND PRESSURE VESSEL CODE.

"U" Certificate of Authorization no. _____ expires _____, 19____

Date _____ Name _____ Signed _____
(assembler that certified and constructed field assembly) (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 Manufacturers' 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 that 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 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 _____ Signed _____ Commissions _____
(Authorized Inspector) (Natl. Bd. (incl. endorsements) state, prov. and nat.)