

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

1. Manufactured & Certified By SMITHCO Engineering, Inc., 640 W. 41st St., Tulsa, OK
(Name and address of manufacturer)

2. Manufactured for C. T. MAIN, INC. PASADENA, CA.
(Name and address of purchaser)

3. Location of Installation C. T. MAIN, INC. Midway Sunset Cogen Project CA.
(Name and address)

4. Type Horiz(Non-Cir) Vessel No. 87B1061-1 (Mfg's Serial No.) 2244 (Drawing) (Net) (Sd. No.) Year Built 1987

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 1986 (Year) and Addenda to 1986 (Date) and Code Case No. _____ . Special service per UG-120(d) _____
Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or sheets of heat exchangers (Name of part, item number, mfg's name and identifying stamp)

6. Covers SA-516-70 .500 .125 FR5.625BK2.9375 76.375
Matl. (Spec. No., Grade) Corner Joint Nom. Thk. (in.) .500 Corr. Allow. (in.) .125 Diam. (R & in) 100% Length (overall) (ft & in) 1150

7. Seams: 1/2 hr. min. RT (Spot or Full) 100% 1
Long. (Wld., Obl., Sngl., Lap, Butt) 1/2 hr. min. R.T. (Spot or Full) RT (Spot, Partial, or Full) Eff. (%) 100% H.T. Temp. (°F) 1
Time (hr) 1/2 hr. min. Girth (Wld., Obl., Sngl., Lap, Butt) RT (Spot, Partial, or Full) No. of Courses 1

8. Ends (a) Matl. SA-516-70 (Spec. No., Grade) (b) Matl. SA-516-70 (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) Front Hd.	.500	.125	N/A				5.375x7.375	76.375	Flat
(b) Back Hd.	.500	.125	N/A				2.9375x7.375	76.375	Flat

If removable, bolts used (describe other fastenings) _____ (Matl. Spec No., Gr., Size, No.)

9. Type of Jacket None Proof Test _____

10. Jacket Closure None If bar, give dimensions _____ If bolted, describe or sketch. _____
(Describe as edges & weld, bar, etc.)

11. Constr. for max. allow. working press. 150 psi at max. temp. 225 °F. Min. temp. (when less than -20°F) _____ °F.
Hydro., pneu., or comb. test press. 225 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: SA-516-70 7.875 .750 .125 Welded
Stationary Matl. (Spec. No., Gr.) SA-516-70 Diam. (in.) (Subject to pressure) 7.875 Nom Thk (in.) .750 Corr. Allow. (in.) .125 Attach (Welded, Bolted)

Plugsheets SA-516-70 7.875 .750 .125 Welded
Matl. (Spec. No., Gr.) SA-516-70 Diam. (in.) 7.875 Nom Thk (in.) .750 Corr. Allow. (in.) .125 Attach

13. Tubes: SA-214 1.00 .060 130 Straight
Matl. (Spec. No., Gr.) SA-214 OD (in.) 1.00 Nom Thk (in or Gauge) .060 Number 130 Type (Straight or 'U')

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

14. Shell: _____
Matl. (Spec. No., Grade) _____ Nom. Thk. (in.) _____ Corr. Allow. (in.) _____ Diam. (ft & in.) _____ Length (ft & in.) _____

15. Seams: _____
Long. (Wld., Obl., Sngl., Lap, Butt) _____ R.T. (Spot or Full) _____ Eff. (%) _____ H.T. Temp. (°F) _____
Time (hr) _____ Girth (Wld., Obl., Sngl., Lap, Butt) _____ R.T. (Spot, Partial, or Full) _____ No. of Courses _____

16. Heads: (a) Matl. _____ (Spec. No., Grade) (b) Matl. _____ (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) _____ (Matl. Spec No., Gr., Size, No.)

17. Max. allow. working press. _____ psi at max. temp. _____ °F. Min. temp. (when less than -20°F) _____ °F.
Hydro., pneu., or comb. test press. _____ psi.

Form U-1 (Back)

Items below to be completed for all vessels where applicable

18. Safety Valve Outlets: Number Cust. Installed Size _____ Location _____

19. Nozzles:

Purpose (Inlet, Outlet, Drain)	No	Dim. or Size	Type	Stub Material	Flange Material	Nom Thk	Reinforcement Met	How Attached
Inlet	1	6"150#	RFWN	None	SA-105	.432	Weld Metal	Welded
Outlet	1	6"150#	RFWN	None	SA-105	.432	Weld Metal	Welded
Vent	1	1"6000#	CPLG	None	SA-105		Weld Metal	Welded
Drain	1	2"150#	RFWN	None	SA-105	.218	Weld Metal	Welded
Drain	1	1"6000#	CPLG	None	SA-105		Weld Metal	Welded

20. Inspection Openings:

Manhole No. _____ Size _____ Location _____

Handholes No. _____ Size _____ Location _____

Threaded No. 260 Size 1.125 Location Plug Sheets

21. Supports: Skirt No Lugs 4 Legs 4 Other _____ Attached Welded to Covers
(Yes or no) (No.) (No.) (Describe) (Where and how)

22. Remarks: Box Type Air Cooled Heat Exchangers Service: Water Cooling
 Item: AC-100C-1

CERTIFICATE OF 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.

Date 12-30-87 Signed SMITHCO Engineering, Inc. by David Jones
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 4175 expires February 28, 19 88

CERTIFICATE OF SHOP INSPECTION

Vessel made 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 or Province of Oklahoma and employed by Victoria Lloyds Insurance Company of Houston, TX.

_____ have inspected the pressure vessel described in this Manufacturers' Data Report on 1-4-88, 19 88, 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 1-4-88 Signed D.A. Jones Commissions NB 8708
(Authorized Inspector) (Nat'l Board, State, Province and No.)

CERTIFICATE OF COMPLIANCE FOR FIELD WORK

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.

Date _____ Signed _____ by _____
(Manufacturer) (Representative)

"U" Certificate of Authorization No. _____ expires _____, 19 _____

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