

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

(Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and Certified by HAMMCO, INC. : 6900 N. MINGO VALLEY EXPRESSWAY; OWASSO, OKLAHOMA 74055
(Name and Address of Manufacturer)

2. Manufactured for PARAGON ENGINEERING SERVICES, INC. : HOUSTON, TEXAS
(Name and Address of Purchaser)

3. Location of Installation KN ENERGY: LATON, KANSAS
(Name and Address)

4. Type HORIZONTAL 96-2251-1 ----- 96-225-10 1616 1996
(Horiz. or Vert. Tank) (Mfr's Serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (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 rules, Section VIII, Division 1 1995
YEAR

to 1995 NONE N/A
Tube & Plug Addenda (Date) Code Case Nos. Special Service per UG-120(d)
6. Shell SA-516-70N 1-1/2" 1/16" 6" X 12-5/8" 10'-11-1/4"
Mat'l. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (Overall) (ft. & in.)

7. Seams CORNER ----- ----- ----- ----- ----- ----- ----- -----
Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp. (F) Time (Hr) Girth (welded, Dbl., Lap, Butt) R.T. (Spot, Partial or Full) No. of Courses

8. Heads: (a) Mat'l. SA-516-70N (b) Mat'l. SA-516-70N
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Radius	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	T, B & E	1-1/8"	1/16"	-----	-----	-----	-----	-----	-----	FLAT
(b)	STAY	7/8"	1/8"	-----	-----	-----	-----	-----	-----	FLAT

If removable, bolts used (describe other fastenings) HEADER PLUGS, SA-105, 1-1/8" DIA. X 1" LG., QTY. 618
(Mat'l., Spec. No., Gr., Size, No.)

9. MAWP 1250 350 psi at max. temp. ----- F
Min. design metal temp. -20 F at 1250 psi. Hydro test pressure 1875 psi

10. Nozzles, inspection and safety valve openings: *

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
INLET	2	12"-600#	RFWN	SA-105 / SA-234-WPB	1.312	WELD METAL	WELDED	----
OUTLET	2	12"-600#	RFWN	SA-105 / SA-234-WPB	1.312	WELD METAL	WELDED	----
VENT / DRAIN	2/2	1"	CPLG.	SA-105	6000#	WELD METAL	WELDED	----
TEMP. CONN.	4	1"	CPLG.	SA-105	6000#	WELD METAL	WELDED	----
PRESS. CONN.	4	3/4"	CPLG.	SA-105	6000#	WELD METAL	WELDED	----

11 Supports: Skirt NO Lugs ----- Legs ----- Other ----- Attached -----
(Yes or No) (No.) (No.) (Describe) (Where and How)

12. Remarks: Manufacturer's 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)

* SAFETY VALVES BY OTHERS PER UG-125 (c) (3) (b). INSPECTION OPENINGS PER UG-46(d)
(309) - 1" O.D. X .065 MIN. WALL X 32'-0" LONG TUBES MATERIAL SPEC. SA-214

EXEMPT FROM IMPACT TESTING PER UCS-66 CURVE D ITEM NO. E-E4100

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. 17343 expires FEB 12, 1997
Date 12-18-96 Co name HAMMCO, INC. Signed Lawrence M. Baker
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel Constructed By HAMMCO, INC. at OWASSO, 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 COMMERCIAL UNION INSURANCE have inspected the component described in this Manufacturer's Data Report on 12-19-96, 1996 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 personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Date 12-19-96 Signed L. S. Cooney Commissions NB # 5145 "A" Okla. # 251
(Authorized Inspector) (Nat'l Board (incl. endorsements), State, Prov. and No.)