

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 J.D.Cousins Inc. 667 Tiffet St. Buffalo N.Y. 14220
(Name and address of manufacturer)
2. Manufactured for A.P.V. Crepaco Inc. 395 Fillmore Ave. Tonawanda N.Y. 14150
(Name and address of purchaser)
3. Location of installation Unknown
(Name and address)
4. Type Vert. Exchanger 290-13A D-4918-3 6083 1990
(Name of vessel) (Mfg. serial No.) (Drawing) (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 1989
Year

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, or shells of heat exchangers

6. Shell: SA 53 B .365 .0625 10" 8'
(Mat'l. Spec. No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft & in.)) (Length (Overall) (ft & in.))
7. Seams: RES 85% 1
(Long. (Dbl., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))
Time Girth (Dbl., Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

8. 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.)

9. Type of Jacket Proof Test
10. Jacket Closure (Describe as ogee & weld, bar, etc.) If bar, give dimensions (If bolted, describe or sketch.)
11. MAWP 50/FV psi at max. temp. 360 °F. Min. design metal temp. 20 °F at 50/FV psi.
Hydro. 75 test press. psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: SA 105 10" 1.1875 .0625 Welded
(Stationary Mat'l. (Spec. No., Gr.)) (Diam. (in.) (Subject to pressure)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Attach. (Welded, Bolted))
- SA 105 10" 1.1875 .0625 Welded
(Floating Mat'l. (Spec. No., Gr.)) (Diam. (in.)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Attach.)
13. Tubes: SA 249-304 .750 .049 76 Straight
(Mat'l. (Spec. No., Gr.)) (O.D. (in.)) (Nom. Thk. (in. or Gauge)) (Number) (Type (Straight or "U"))

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

14. Shell: SA 53B .365 .0625 10" 9"
(Mat'l. (Spec. No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft & in.)) (Length (Overall) (ft & in.))
15. Seams: RES 85% 1
(Long. (Dbl., Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))
Time Girth (Dbl., Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

16. Heads: (a) Mat'l. SA 516-70 (Spec. No., Grade) (b) Mat'l. 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) | <u>Top</u> | <u>.5120</u> | <u>.0625</u> | | | | | | <u>10"</u> | |
| (b) | <u>Bottom</u> | <u>.5120</u> | <u>.0625</u> | | | | | | <u>10"</u> | |

If removable, bolts used (describe other fastenings) SA 193 B7 Studs

(Mat'l., Spec. No., Gr., Size, No.)

17. MAWP 75/FV psi at max. temp. 360 °F. Min. design metal temp. 20 °F at 75/FV psi.
Hydro. 113 test press. psi.

Form U-1 (Back)

18. Nozzles, Inspection and Safety Valve Openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
Inlet	1	6"	Nozz	SA 53 B	.280		Welded	Side
Outlet	1	4"	Nozz	SA 53 B	.237		Welded	Side
In/Out	2	3"	Nozz	SA 53 B	.216		Welded	Top/Bottom
Vent	1	1"	Coup	SA 105	3000#		Welded	Top
Drain	1	1"	Coup	SA 105	3000#		Welded	Bottom

19. Supports: Skirt Yes Lugs Legs Other Attached Welded Bottom
(Yes or no) (No.) (No.) (Describe) (Where and how)

20. 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, etc. name and identifying stamp)

Unit is a Heat Exchanger Exempt from impact testing per UG 20 (f). & UHA 51
Unit Was tested in the Horizontal position.

PO. # P 91249

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. 1219 expires 1/31 93
 Date 5/31/90 Co. name J.D. Cousins Inc. Signed Ronald Z. Wahl
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by J.D. Cousins Inc. 667 Tiff St. Buffalo N.Y. 14220

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 New York and employed by H.S.B.I. & I. Co. of Hartford CT.

have inspected the pressure vessel described in this Manufacturer's Data Report on 5/30, 19 90, 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 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 5/30/90 Signed Ronald Z. Wahl Commissions NG10009 NY 3081
(Authorized Inspector) (Nat'l Board, State, Province 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 Co. name Signed
(Assembler that certified and constructed field assembly) (By 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 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 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. endorsements), State, Prov., and No.)