

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 by DOYLE & ROTH MFG. CO. INC., LACKAWANNA CTY., SIMPSON, PA. 18407
2. Manufacturer for HOFFMANN-LAROCHE INC., CENTRAL RECEIVING,
3. Location of installation BLDG. 200, BELVIDERE, NEW JERSEY 07823
4. Type HORIZ. Vessel No. J-2159-8 (Name and address of manufacturer)
(Horiz. or vert. tank) (Mfg's Serial No.) (CRN) (Drawing) (Nat'l Id No.) Year Built 1979
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 1977 and Addenda to W77 and Code Case no. Special service per UG-120(d) (Year)
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, mfg's name and identifying stamp)

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers
6. Shell: Material SA240 T316 Nominal Thickness 1/4 in. Corrosion Allowance _____ in. Diam. 3 ft _____ in. Length 11 ft 11-7/8
(Spec. No., Grade) (Spot or Full) Efficiency 70 % H.T. Temp _____ F
7. Seams: Longitudinal DWB R.T. _____ Time _____ Girth DWB R.T. _____ No. of Courses 2
(Welded, Dbl., Engr., Lap, Butt) (Spot, Partial or Full) (Welded Dbl., Engr., Lap, Butt) (Spot, Partial or Full)
8. Heads: (a) Material _____ (b) Material _____
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio
(a)						
(b)						
	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)		
(a)						
(b)						

If removable, bolts used (describe other fastenings) _____

(Material, Spec. No., Gr., Size, No.)

9. Type of Jacket _____ Proof Test _____
10. Jacket Closure _____ If bar, give dimensions _____ If bolted, describe or sketch
(Describe as open & weld, bar, etc.)
11. Constructed for max. allowable working pressure 20 psi at max. temp. 200° F Min. temp. (when less than -20 F) _____ F.
Hydrostatic, pneumatic, or combination test pressure 30 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: Stationary—Material SA240 T316 Diam. 37-7/8 in. Nominal Thickness 1-3/8 Corrosion
(Spec. No., Gr.) (Subject to pressure)
Allowance _____ in. Attachment Welded Floating—Material _____ Diam. _____ in.
(Welded, Bolted) (Spec. No., Grade)
Nominal Thickness _____ in. Corrosion Allowance _____ in. Attachment _____

13. Tubes: Material SA249 T316 O.D. 3/4 in. Nominal Thickness 16 XXX gauge Number 1072 Type Strt.
(Spec. No., Gr.) (Straight or "U")

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

14. Shell: Material SA285C Nominal Thickness 3/8 in. Corrosion Allowance 1/16 in. Diam. 3 ft _____ in. Length 1 ft 8 in.
(Spec. No., Gr.)

15. Seams: Longitudinal DWB R.T. _____ Efficiency 70 % H.T. Temp _____ F Time _____
(Welded, Dbl., Engr., Lap, Butt) (Spot or Full)
Girth DWB R.T. _____ No. of courses 1
(Welded, Dbl., Engr., Lap, Butt) (Spot, Partial or Full)

16. Heads: (a) Material SA285C (b) Material _____
(Spec. No., Grade) (Spec. No., Gr.)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio
(a)	<u>Ends</u>	<u>3/8"</u>	<u>1/16"</u>	-	-	<u>2:1</u>
(b)						
	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)		
(a)				<u>Concave</u>		
(b)						

If removable, bolts used (describe other fastenings) Alloy SA-193 B7M & SA-194 2H (32) 3/4"
(Material, Spec. No., Gr., Size, No.)

FORM U-1 (BACK)

17. Constructed for max. allowable working pressure 100 psi at max temp. 150° F. Min. temp. (when less than -20 F) _____

Hydrostatic, pneumatic, or combination test pressure 150 psi.

Items to be completed for all vessels where applicable

18. Safety Valve Outlets: Number Unknown Size _____ Location Up to Others

19. Nozzles: _____

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached
Inlet-Outlet	2	8"	RF/SO	SA105	SA53B	Sch 30	Welded
Inlet-Outlet	2	4"	LJ	SA105	SA312-T316	Sch 10	Welded
Inlet-Outlet	1	1 1/8"	SO/RF	SA105	SA240-T316	1 1/8"	Welded
Vent-Drain	1	3/4"	3000#	H.C.	SA182-T316	w/SS Plug	Welded

20. Inspection Openings: See Nozzles

Manholes No. _____ Size _____ Location _____

Handholes No. _____ Size _____ Location _____

Threaded No. _____ Size _____ Location _____

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

22. Remarks: Horizontal Shell & Tube Heat Exchanger
Tag B8-E-522, Equip. Code # CSF5

CERTIFICATE OF 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.

Date OCT 15 1979 Signed DOYLE & ROTH MFG. CO., INC. by [Signature] (Manufacturer) (Representative)

"U" Certificate of Authorization No. 982 expires 1/31/1981

CERTIFICATE OF SHOP INSPECTION

Vessel made by DOYLE & ROTH MFG. CO., INC. at Lackawanna Cty., Simpson,

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State Province of Penna. and employed by _____

of Norwood, Mass. have inspected the pressure vessel described in this Manufacturers' Data Report on OCT 15 1979 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 OCT 15 1979 Signed William R. Rogers Jr. (Inspector) Commissions NB7980 PA2204 (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 _____ (Manufacturer) by _____ (Representative)

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

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

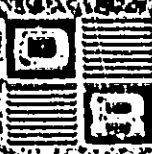
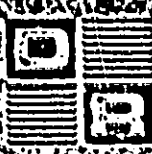
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State Province of _____ and employed by _____

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 _____ (Authorized Inspector) Commissions _____ (Nat'l Board, State, Province and No.)

		DOYLE & ROTH MFG. CO., INC.	
		NEW YORK, N.Y.	
MFG. SERIAL NO.		NAT'L BOARD NO.	
1192159148		10275111	
DIVISION I		W.P.	
COMPRESSOR		M.A.W.P. P.S.I.G.	
EQUIPMENT NO.		MAX TEMP. °F	
522		200	
SHELL		TUBE	
1010		150	
YEAR BUILT		DWG NO.	
1979		B217A616	
			
1192159148			