EQUIP. CODE NO. C S E - 1 ...

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 by ROCKAWAY TANK, INCORPORATED DOVER, N. J.
(Name and address of manufacturer)

2. Manufactured for HOFFMANN-La ROCHE, INCORPORATED NUTLEY, N. J.
(Name and address of purchaser)

3. Location of installation HOFFMANN-La ROCHE, INCORPORATED BELVIDERE, N. J.
(Name and address)

4. Type Vertical (Horiz., or vert. tank) Vessel No. R-4559-512 (Mfgr's Serial No.) (CRN) RT-4-621B (Drawing) 512 (Nat'l Bd No.) Year Built 1980

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 (Year) and Addenda to S-79 (Date) and Code Case no. N/A

Special service per UG-120(d) N/A

Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A
(Name of part, item number, mfgr's name and identifying stamp)

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

6. Shell: Material SA-240 T-316 (Spec No., Grade) Nom. Thickness 3/16 in. Corrosion Allowance 0 in. Diam. 1 ft. 6 in. Length 15 ft. 11-3/4 in. (Overall)

7. Seams: D.B. & S.B. & Backup
Longitudinal D.B. (Dbl., Sngl.) R.T. No (Spot or Full) Efficiency 70 % H.T. Temp ___ F Time ___ Girth Weld (Dbl., Sngl.) R.T. No (Spot, Partial, or Full) No. of Courses 7

8. Heads: (a) Material ___ (Spec. No., Grade) (b) Material ___ (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) ___ (Material, 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.

Full Vac

11. Constructed for max. allowable working pressure & 30 psi at max. temp. 300 F Min. temp. (when less than -20 F) ___ F.
Hydrostatic, ~~Pneumatic~~ test pressure 50 psi.

Items 12 and 13 to be completed for tube sections T-316

12. Tubesheets: Stationary Material SA-240 (Spec. No., Gr.) Diam. 18 in. (Subject to pressure) Nominal Thick. 1-3/16" in. Corrosion Allow. 0 in. Attachment Welded (Welded, Rolled)
Floating Material ___ (Spec. No., Gr.) Diam. ___ in. Nominal Thick. ___ in. Corrosion Allow. ___ in. Attachment ___

13. Tubes: Material SA-249 T-316 (Spec. No., Gr.) O.D. 3/4 in. Nominal Thickness 16 in. ~~Gauge~~ Number 268 Type Straight (Straight or "U")

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

14. Shell: Material SA-240 T-316 (Spec No., Gr.) Nominal Thickness 3/16 in. Corrosion Allowance 0 in. Diam. 1 ft. 6 in. Length 0'-8" 1 ft. 9½ in.

15. Seams: Weld Weld.
Longitudinal D.B. (Dbl., Sngl.) R.T. No (Spot or Full) Efficiency 70 % H.T. Temp ___ F Time ___ Girth D.B. (Dbl., Sngl.) R.T. No (Spot, Partial or Full) No. of courses 1 Each

16. Heads: (a) Material SA-240, T-316 (Spec. No., Grade) (b) Material SA-515 Gr. 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)	Top	1/8"	0	18"	1-1/2"					Concave
(b)	Bottom	1-1/8"	0						18"	Flat

If removable, bolts used (describe other fastenings) a & b SA-193 Gr. B-7, (16) 5/8" Dia. Bolts (Material, Spec. No., Gr., Size, No.)

17. Max. allowable working pressure 100 psi at max temp. 300 F. Min. temp ___ F. Hydro. test pressure 155 psi.

Items below to be completed for all vessels where applicable

18. Safety Valve Outlets: Number ___ Size ___ Location ___

This form may be obtained from the National Board of Boiler and Pressure Vessel Inspectors, Columbus, Ohio.

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10. Nozzles:

Purpose (Inlet, Outlet, Drain)	Number	Diam or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached
Shell Inlet	1	16"	Flgd./ Nozz.	SA-105 / SA-240,T-316	150# 3/8"	Weld	Welded
Channel Inlet	1	10"	"	" "	150# / 3/16"	"	"
Channel Outlet	1	10"	"	" "	150# / 3/16"	"	"
Shell Outlet	1	3"	Flgd./ Nozz.	SA-105 / SA-312TP-316	150# ,216"	"	"
Insturment	13	3/4"	Thread Coupl.	SA-182F-316	3000#	"	"

20. Inspection Openings:

Manholes No. _____ Size _____ Location _____

Handholes No. _____ Size _____ Location _____

Threaded No. _____ Size _____ Location _____

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

22. Remarks: 848 Sq. Ft. Surface Fixed Tubesheet Shell & Tube Heat Exchanger, TEMA Type AEM. Shell Contains Combination Vapor Chest & Expansion Joint 25½" I.D. X 20" Long With 1/4" Nom. Tk. Flanged Only & Flued Heads on Each End Reducing to 17-5/8" I.D. at Shell Junction. All Material SA-240, T-316.

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 Feb. 14, 1980 Signed ROCKAWAY TANK, INC. (Manufacturer) by Eric A. Walter Pres. (Representative)

"U" Certificate of Authorization No. 7712 expires February 28, 19 82.

CERTIFICATE OF SHOP INSPECTION

Vessel made by ROCKAWAY TANK, INC. at DOVER, N. J.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of N. J. and employed by STATE of NEW JERSEY of _____ have inspected the pressure vessel described in this Manufacturers' Data Report on Feb. 14, 1980, 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 February 27, 1980

Signed _____ (Inspector) Commissions N.B. 6575 (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 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 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.)

P.O. No. E-664412-B Pos. No. B8-E-605 Equip. Code: CSE-1