

FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS
As required by the Provisions of the ASME Code Rules

91848

1. Manufactured by Buckley Iron Works, Inc. Boston, Mass.
(Name and address of Manufacturer)

2. Manufactured for Polaroid Corp. Waltham, Mass.
(Name and address of Purchaser)

3. Type Vent Kind tank jacket Vessel No. 4498-27 (Mass.) Natl. Bd. No. 287 Yr. Built 1967
(Hulls, or Vess.) (Tank, Jacketed, Heat Exch.) (Mfg. Serial) (State & State No.)

Items 4-9 incl. to be completed for single wall vessels (such as air tanks), jackets of jacketed vessels, or shells of heat exchangers.

4. SHELL: Material Sa-240-304 T.S. 75,000 Nominal Thickness 1.25 In. Allowance In. Diam. 1 Ft. 8 In. Length 2 Ft. 8 In.
(Kind and Spec. No.) (Fig. or P.B. & Spec. Min. T.S.) (Corrosion)

5. SEAMS: Long weld back strip H.T. No X.R. No Sectioned No Efficiency 65 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

If elevated describe seams fully on reverse side of form.

6. HEADS (a) Material Sa-240-304 T.S. 75,000 (b) Material Sa-240-304 T.S. 75,000
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) Top	.125	20"	1 1/4"					Concave
(b) Bottom	.125	20"	1 1/4"					"

If removable, bolts used Sa-913B7 120,000 3/4" 6 Other fastening
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

7. STAYBOLTS: (Material) If hollow Attachment Pitch X (Vert.) Diam. (Nominal)
(Size of Hole) (Threaded, Welded) (Hulls) (Vert.)

8. JACKET CLOSURE:
(Describe on cover & weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)

9. Constructed for max. allowable working press 75 psi at max. temp. 300 °F. Min. temp. (when °F. less than -20°) Test Press 113 psi.
(Hydrostatic, Pneumatic or Combination)

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary. Material Diam. In. Thickness In. Attachment
(Kind & Spec. No.) (Subject to Pressure) (Welded, Bolted)

Floating. Material Diam. In. Thickness In. Attachment
(Kind & Spec. No.)

11. TUBES: Material O.D. In. Thickness Inches or Gage Number Type
(Kind & Spec. No.) (Straight or U)

Items 12-15 incl. to be completed for inner chambers of jacketed vessels, or channels of heat exchangers.

12. SHELL: Material Sa-240-316 T.S. 75,000 Nominal Thickness 1.88 In. Allowance In. Diam. 1 Ft. 6 In. Length 2 Ft. 2 In.
(Kind and Spec. No.) (Fig. or P.B. & Spec. Min. T.S.) (Corrosion)

13. SEAMS: Long weld dbl butt H.T. No X.R. No Sectioned No Efficiency 70 %
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)

If elevated describe seams fully on reverse side of form.

14. HEADS (a) Material Sa-240-316 T.S. 75,000 (b) Material T.S. (c) Material T.S.
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)

Location	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) Top, bottom, ends	.188	18"	2 1/4"					Concave
(b) Channel								
(c) Floating								

If removable, bolts used (a) (b) (c)
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

15. Constructed for max. allowable working press 100 psi at max. temp. 300 °F. Min. temp. (when °F. less than -20°) Test Press 150 psi.
(Hydrostatic, Pneumatic or Combination)

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number 2 Size 1" Location Top

17. NOZZLES

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
charging	1	4"	tank spud	316s/s			welded
ln & out	2	3/4"	3000# coup	304s/s			"
ln & out	3	1/2"	3000# coup	304s/s			"
Relief	1	1"	3000# coup	316s/s			"
Vent	1	1/2"	sch40 pipe	316s/s			"
Nitrogen	1	1/2"	sch40 pipe	316s/s			"
drain	1	3/4"	3000# coup	304s/s			"
Lev Connector	1	1"	sch40 pipe	316s/s			"
agitator mt	1	2 1/2"	sch80 pipe	316s/s			"
outlet	1	1"	butt	316s/s			"

Rev

(Over)

FORM U-1 (back)

18. INSPECTION Manholes; No. _____ Size _____ Location _____
 OPENINGS: Handholes, No. _____ Size _____ Location _____
 Threaded, No. _____ Size _____ Location _____

19. SUPPORTS: Skirt _____ Legs _____ Other _____
 (Y or N) (Number) (Number) (Number)

20. REMARKS: _____

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State capacity of each part.)

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 Unfired Pressure Vessels.

Date 1-18 19 68 Signed Buckley Iron Works, Inc. By B. Kemp
 (Manufacturer)

Certificate of Authorization Expires 12-31-70

CERTIFICATE OF SHOP INSPECTION

VESSEL MADE BY Buckley Iron Works, Inc. at Boston, Mass.

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and in the State of Mass. and employed by Hartford Steam Boiler Insulator Co. at Hartford, Conn. have inspected the pressure vessel described in this manufacturer's data report on 1-18 1968, and state that to the best of my knowledge and belief the manufacturer has constructed this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code.

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 1-18 1968

Inspector's Signature [Signature] Commission N. B. 4938
 National Board of Boiler and Pressure Vessel Inspectors

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and in the State of _____ and employed by _____ 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 the applicable sections of the ASME Boiler and Pressure Vessel Code. 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 _____ 19 _____

Inspector's Signature _____ Commission _____
 National Board of Boiler and Pressure Vessel Inspectors