

**FORM U-1 MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS**  
 As required by the Provisions of the ASME Code Rules, Section VIII, Division I B3-3372

1. Manufactured by IPSCO Fabricators, 1555 S. Clarkson Street, Charlotte, North Carolina  
(Name and address of Manufacturer)

2. Manufactured for Luwa Corporation, Charlotte, North Carolina  
(Name and address of Purchaser) 99694

3. Type Vertical Kind Jacketed Vessel No. (BZ-7367) ) Natl. Bd. No. 1647 Yr. Built 1971  
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Mfrs. 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-515Gr.70 T.S. 70,000 Nominal Thickness 5/16 In. Corrosion Allowance 0 In. Diam. 2 Ft. 11 In. Length 0 Ft. 5 In.  
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

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

If riveted describe seams fully on reverse side of form.

6. HEADS (a) Material SA-285 Gr. C Flg'ds. 55,000 (b) Material SA-515 Gr. 70 T.S. 70,000  
(Top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter (Convex or Concave)

(a) Top 1 3/8" Flg'd  
 (b) Bottom 5/16" 60° Concave

If removable, bolts used \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

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

8. JACKET CLOSURE: Bar 1 3/8" x 2 5/16"  
(Describe as ogee & weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)

9. Constructed for max. allowable working press<sup>2</sup> 150 psi at max. temp. 365 °F. Min. temp. (when \_\_\_\_\_) \_\_\_\_\_  
Hydrostatic Pneumatic or } Test Press 225 psi  
 °F. less than -20° °F. 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-240T-316L T.S. 70,000 Nominal Thickness 11/16 In. Corrosion Allowance 0 In. Diam. 2 Ft. 9 In. Length 0 Ft. 5 In.  
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)

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

Girth Dbl. Butt H.T. No R.T. No Sectioned No No. of courses 2

If riveted describe seams fully on reverse side of form.

14. HEADS (a) Material SA-285C Flg'ds. 55,000 (b) Material SA-240T-316L 70,000 Material \_\_\_\_\_ T.S. \_\_\_\_\_  
(Top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter (Convex or Concave)

(a) Top 1 3/8" Flg'd  
 (b) Bottom 11/16" 60° Concave & Convex  
 (c) Floating \_\_\_\_\_

If removable, bolts used (a) \_\_\_\_\_ (b) B3 3372  
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)

(c) \_\_\_\_\_ Other fastening \_\_\_\_\_

15. Constructed for max. allowable working press<sup>2</sup> \_\_\_\_\_ psi at max. temp. \_\_\_\_\_ °F. Min. temp. (when \_\_\_\_\_) \_\_\_\_\_  
Hydrostatic Pneumatic or } Test Press \_\_\_\_\_ psi  
 °F. less than -20° °F. Combination

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

17. NOZZLES

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Inlet & Outlet	2	2"	Flg'd	SA53Gr.B	Sch. 40	None	Welded
Outlet	1	8"	"	SA-312	1/4"	"	"

EQUIP. CODE N. EV P 145  
 RECORD PRINT  
 PROJECT 66

<sup>1</sup> Postweld heat-treated. <sup>2</sup> List under remarks other internal or external pressures with coincident temperature when applicable.



18. INSPECTION Manholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 OPENINGS: Handholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

19. SUPPORTS: Skirt No Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
 (Yes or No) (Number) (Number) (Describe) (Where & How)

20. REMARKS: Bottom Cone This vessel is a 60° Jacketed Toriconical section 2'9" I. D.  
 x 8" I. D. x 34" long from face of flange to face of flange. Luwa P. O. # 2183,  
 dated 5-29-70.

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents 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 Pressure Vessels, Section VIII, Division I.

Date March 25, 19 71 Signed IPSCO Fabricators By Richard S. Jones  
 (Manufacturer)

Certificate of Authorization Expires December 31, 1973

**CERTIFICATE OF SHOP INSPECTION**

VESSEL MADE BY IPSCO Fabricators at Charlotte, North Carolina

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province N. C. and employed by Lumbermens Mutual Casualty Company of Chicago, Illinois have inspected the pressure vessel described in this manufacturer's data report on 3/26 19 71, 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 3/26 19 71

A. Van Malamb Commissions NB-4036  
 Inspector's Signature Nat'l Board, State, or Province and No.

**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 \_\_\_\_\_ 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 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 \_\_\_\_\_

[Signature] Commissions \_\_\_\_\_  
 Inspector's Signature Nat'l Board, State, or Province and No.

EVP-145



FORM U-1A MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS

Alternate Form for Single Chamber Completely Shop-Fabricated Vessels Only **B3-3372**

1. Manufactured by IPSCO Fabricators, 1555 S. Clerken Street, Charlotte, North Carolina  
(Name and address of Manufacturer)  
 Manufactured for Luna Corporation, Charlotte, North Carolina  
(Name and address of Purchaser)

3. Type Vertical Vessel No. (82-7367-2) ((Mfrs. Serial)) ((State & State No.)) Natl. Bd. No. 1548 Yr. Built 1971  
(Horiz. or Vert.)

4. SHELL: Matl. SA-240 T-316 T.S. 75,000 Nom. 180 In. Allow 0 In. Diam. 1 Ft. 0 In. Length 2 Ft. 11 In.  
(Kind and Spec. No.) (Flg. or F.B. & Spec. Min. T.S.) (Spot or Complete) (Yes or No) (Yes or No)

5. SEAMS: Long Obli. 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)  
 Girth Obli. Butt H.T. No X.R. No Sectioned No No. of Courses 1

If riveted or brazed describe seams fully under remarks.

6. HEADS (a) Material SA-181 Flg'd T.S. 70,000 (b) Material \_\_\_\_\_ T.S. \_\_\_\_\_  
(Top, bottom, ends) (Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)  
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Side to Pressure (Convex or Concave)  
 (a) Top & bottom 150/ P. S. Flanges  
 (b) \_\_\_\_\_

7. Constructed for max. allowable working press. 15 psi at max. temp. 400 °F. Min. temp. (when less than -20°) \_\_\_\_\_ °F.  
 Other fastening \_\_\_\_\_  
 Test Press 23 psi.  
(Hydrostatic, Pneumatic or Combination)

8. SAFETY OR RELIEF VALVE OUTLETS: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

9. NOZZLES:

Purpose (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached
Inlet & Outlet	1	1 1/2	Flg'd	T-316	3/16		Welded
Sight Glass	2	3/4		T-316			Welded

10. INSPECTION MANHOLES, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 OPENINGS: Handholes, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_  
 Threaded, No. \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_

11. SUPPORTS: Skirt No Lugs 1 Legs \_\_\_\_\_ Other (1) Pipe hanger Attached Welded to shell  
(Yes or No) (Number) (Number) (Describe) (Where & How)

12. REMARKS: Horizontal level tank. This vessel is a 12" Sch. 10 pipe flanged at each end.  
Luna P. O. # 2103, Serial 5-23-70.

(Brief description of purpose of the vessel as Air Tank, Water Tank, L.P.G., Etc.—State Contents.)  
 1 If postweld heat-treated.  
 2 List other internal or external pressures with coincident temperature when applicable.

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 and service information supplied by customer.

Date March 29, 19 71 Signed IPSCO FABRICATORS By Richard S. Jones  
(Manufacturer)  
 December 31, 1973

Certificate of Authorization Expires \_\_\_\_\_

**CERTIFICATE OF SHOP INSPECTION**

VESSEL MADE BY IPSCO Fabricators at Charlotte, North Carolina

North Carolina holds a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of Chicago, Illinois and employed by Continental Casualty Company

I, John M. Malone, have inspected the pressure vessel described in this manufacturer's data report on 3/26 19 71, 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 3/26 19 71 Commissions MB-4036  
John M. Malone Inspector's Signature Nat'l Board or State and No.

**EXP-145**



FORM R-1 REPORT OF WELDED REPAIR  
in accordance with provisions of the National Board Inspection Code

EV 100145  
E3372  
10003868

1. Work performed by Superior Welding Company  
(name of repair organization)  
97 Elliot St., Avenel NJ 07001  
(address) (Form R No.)  
SW98-146  
(P.O. NO. Job No. etc.)

2. Owner Roche Vitamins, Inc.  
(name)  
205 Roche Drive, Belvidere, NJ  
(address)

3. Location of installation Roche Vitamins, Inc.  
(name)  
205 Roche Drive, Belvidere, NJ  
(address)

4. Unit identification Pressure Vessel (boiler, pressure vessel) Name of original manufacturer IPSCO Fabricators

5. Identification nos.: BZ-7367-1 (mfg serial no.) 1647 (national board number) 1971 (year built)  
(jurisdiction no.) (other)

6. NBIC Edition/Addenda: 1995-1/98 Original Construction Code: Section VIII, 1971  
(if known) (incl edition and addenda)

7. Description of work:

Vee out and weld cracks around the nozzle.

(use supplemental sheet, Form R-4, if necessary)

Pressure Test, if applied. 80 psi

8. Replacement Parts. Attached are Manufacturer's Partial Data Reports or Form R-3s properly completed for the following items of this report:

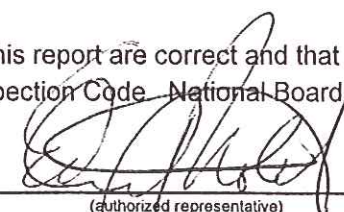
(name of part, item number, data report type, mfr's. name and identifying stamp)

9. Remarks: Welder and welding procedures per Section IX ASME Code.

ROUTING

CERTIFICATE OF COMPLIANCE

Edward J. Notch, certify that to the best of my knowledge and belief the statements in this report are correct and that all material, construction, and workmanship on this repair conforms to the National Board Inspection Code National Board "R" certificate of Authorization No. 359 Expires On January 22 2000

Date November 02 1998 Superior Welding Company Signed   
(name of repair organization) (authorized representative)

CERTIFICATE OF INSPECTION

I, Harald Oeckinghaus, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of New Jersey and employed by Factory Mutual Engineering Association/Protection Mutual Insurance of Norwood, Massachusetts have inspected the work described in this report on \_\_\_\_\_ and state that to the best of my knowledge and belief this work complies with the applicable requirements of the National Board Inspection Code. By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or of any kind arising from or connected with this inspection.

Date NOV. 20, 1998 Signed  Commissions NA10030 "S" NJ 815"  
(inspector) (National Board (incl endorsements), and jurisdiction, and no.)