P. O. No. 336-097-16042-03-000-FCD Item T-111 12232

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

As Required by the Provisions of the ASME Code Rules

1. Manufactured by POTTSTOWN METAL PRODUCTS WORKS, POTTSTOWN, PA. (Name and address of Manufacturer)
2. Manufactured for HERCULES POWDER COMPANY, WILMINGTON, DELAWARE (Name and address of Purchaser)
3. Type Vert. (Horiz. or Vert.) Kind Jkt. Tk. (Tank, Jacketed, Heat Exch.) Vessel No. (5801) (Mfrs' Serial) ( ) (State & State No.) Nat'l Bd. No. 3182 Yr. Built 1962

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-285 Gr.C (Kind and Spec. No.) T.S. Flg. 55000 (Flg. or P.B. & lowest T.S.) Nominal Thickness 1/4 in. Corrosion Allowance 1/16 in. Diam. 7 ft. 0 in. Length 6 ft. 6 in.
5. Seams: Long DBfusion weld (Welded, Dbl., Single, Lap, Butt) S.R. No (Yes or No) X.R. Spot (Spot or Complete) Sectioned No (Yes or No) Efficiency 85 %
   Girth DBfusion weld S.R. No X.R. Spot Sectioned No No. of Courses One
   If riveted describe seams fully on reverse side of form.
6. Heads: (a) Material SA-285 Gr.C T.S. Flg. 55000 (b) Material T.S.

	Location (Top, bottom, ends)	Thickness	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	Bottom	1/2"	78"	5 1/8"					Concave
(b)									

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

7. Staybolts: (Material) If hollow (Size of Hole) Attachment (Threaded, Welded) Pitch (Horiz.) X (Vert.) Diam. (Nominal)
8. Jacket Closure: Jktd. shell welded with 1 1/8" thk. x 78" I.D. x 85" O.D. ring to shell (Describe as ogee & weld, bar, etc. If bar, give dimensions. If bolted, describe or sketch.)
9. Constructed for {Int.} pressure of 40 psi. Max. Temp. 287 °F. Subzero °F. Hydrostatic Test 60 psi.

Items 10 and 11 to be completed for tube sections.

10. Tube Sheets: Stationary. Material (Kind & Spec. No.) Diam. (Subject to Pressure) in. Thickness in. Attachment (Welded, Bolted)
    Floating. Material Diam. in. Thickness in. Attachment
11. Tubes: Material (Kind & Spec. No.) O.D. in. Thickness inches or gage. Number Type (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-240Tp304 (Kind and Spec. No.) T.S. 75000 (Flg. or P.B. & lowest T.S.) Nominal Thickness 1/4 Corrosion Allowance in. Diam. 6 ft. 6 in. Length 11 ft. 4 in.
13. Seams: Long DBfusion weld (Welded, Dbl., Single, Lap, Butt) S.R. No (Yes or No) X.R. Spot (Spot or Complete) Sectioned No (Yes or No) Efficiency 85 %
    Girth DBfusion weld S.R. No X.R. Spot Sectioned No No. of Courses Two
    If riveted describe seams fully on reverse side of form.
14. Heads: (a) Material SA-240Tp304 T.S. 75000 (b) Material SA-240Tp304 T.S. 75000 (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)
(a)	Top	1/4"	78"	4 3/4"					Concave
(b)	Bottom	1/2"	72"	4 3/4"					Convex & Concave
(c)	Floating								

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

15. Constructed for {Int. 35 / Ext. 40} pressure of psi. Max. Temp. 300 / 287 °F. Subzero °F. Hydrostatic Test 53 psi.

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
inlets & outlets	Seven	1" 2 1/2" 1 1/2" 3"	Flg.	SS304, SA-106	Sch. 40		Welded
inlets & outlets	three	12" 4" 1 1/2"	Pad	SS304	1 9/16" 2"		Welded
drain	three	2 1/2" 1"	Flg. Th'd.	SS304 SA-106	Sch. 80 Sch. 40		Welded

Four 1/2" 3/4" Th'd. SS304, SA-105 3000# Welded

18. Inspection Openings: Manholes, No. One Size 18" Location in top head. Welded
    Handholes, No. Size Location
    Threaded, No. Size Location
19. Supports: Skirt (Yes or No) No Lugs (Number) four Legs (Number) Other (Describe) Attached Wld. to shell (Where & How)
20. Remarks: Nutrient cooker built in accordance with 1959 ASME code.

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

(Over)

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this unfired pressure vessel conform to the ASME Code for Unfired Pressure Vessels.

Date April 12, 1962 Signed Pottstown Metal Products Wks. (Manufacturer) By

Certificate of Authorization Expires Dec. 31, 1964

CERTIFICATE OF SHOP INSPECTION

Insurance Company's Serial Number 4034

VESSEL MADE BY Pottstown Metal Products Wks. at Pottstown, Pa.

I, the undersigned, holding a Certificate of Competency as an Inspector of Boilers and Unfired Pressure Vessels in THE STATE OF Pennsylvania and employed by HARTFORD STM. BLR. INSP. & INS. CO., HARTFORD CONN.

inspected internally and externally, the vessel described in this report on April 12, 1962 and certify that the statements made in this report are correct, corresponding with mill test reports of materials furnished by the builders, and measurements made of the vessel; and that this vessel is constructed in accordance with the ASME Code for Unfired Pressure Vessels.

Date April 12, 1962

Inspector's Signature

Commissions NB 589 Pa. 830
State or Nat'l Bd. & Number

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a Certificate of Competency as an Inspector of Boilers and Unfired Pressure Vessels in THE STATE OF and employed by of , have compared the statements in this manufacturer's data report with the completed vessel, and certify that parts referred to as data items were completed in the field in accordance with the requirements of the ASME Code for Unfired Pressure Vessels. The completed vessel was inspected and subjected to a hydrostatic test of psi.

Date , 19

Inspector's Signature

Commissions
State or Nat'l Bd. & Number

FORM R-2 REPORT OF ALTERATION

in accordance with provisions of the National Board Inspection Code

1. Work performed by ALLOY FABRICATORS, INC. (name of alteration organization) 1 (Form R No.) JMZ-27-96 KM 2-27-96
   102 SOUTH INDUSTRIAL DRIVE, TRENTON GA 30752 (address)

2. Owner SOFIX CORPORATION (name)
   2800 RIVERPORT RD., CHATTANOOGA TN 37406 (address)

3. Location of installation SOFIX CORPORATION (name)
   2800 RIVERPORT RD., CHATTANOOGA TN 37406 (address)

4. Unit identification JKT. VESSEL (boiler, pressure vessel) Name of original manufacturer POTTSTOWN METAL PRODUCT WORKS

5. Identifying nos.: 5801 (mfg serial no.) 3182 (National Board No.) _____ (jurisdiction no.) _____ (other) 1962 (year built)

6. NBIC Edition/Addenda: 1992/1993 Original Construction Code: ASME SECT. VIII (incl edition and addenda)

7. Description of work: ADDED (2) 4" NOZZLES 150# RFSO FLGS (SA-182F304) & SCH40S PIPE (SA-312TP304), MOVED SUPPORT LUGS FROM JACKET TO SHELL, ADDED 1/8" THK RAIN SHIELD, REPLACED FLGS ON NOZZLES F (1 1/2") AND E (3") 150# RFSO FLG SA-182F304 AND NOZZLE K (3") L (2 1/2") AND M (2 1/2") 150# RFSO FLG SA-105. NOZZLE M ALSO HAD THE PIPE REPLACED SCH 40 PIPE SA-53-B (use supplemental sheet, Form R-4, if necessary)

Pressure Test, if applied LINE 9 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: INNER SHELL WAS HYDRO TESTED @ 50 PSI (HORIZONAL) AND THE JACKET WAS HYDRO TESTED @ 15 PSI (HORIZONAL)

Form R-2 (back)

1
(Form R No.)
JM 2-27-96
KM 2-27-96

DESIGN CERTIFICATION

I, KEVIN W. MULLINS, certify that to the best of my knowledge and belief the statements in this report are correct and that the Design Change described in this report conforms to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. 1476 expires on 04/28, 19 96

Date 2-27, 19 96 ALLOY FABRICATORS INC. Signed K. W. Mullins
(name of design organization) (authorized representative)

CERTIFICATE OF DESIGN CHANGE REVIEW

I, James R. Myhan, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of Tennessee and employed by Kemper National Insurance Co's of Long Grove, IL have reviewed the design change as described in this report and state that to the best of my knowldge and belief such change 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 loss of any kind arising from or connected with this inspection.

Date 2-27, 19 96 Signed James R. Myhan Commissions NB 10822A, TN 2693
(inspector) (National Board (incl endorsements), and jurisdiction, and no.)

CONSTRUCTION CERTIFICATION

I, KEVIN W. MULLINS, 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 Alteration conforms to the National Board Inspection Code.

National Board "R" Certificate of Authorization No. 1476 expires on 04/28, 19 96

Date 2-27, 19 96 ALLOY FABRICATORS, INC. Signed K. W. Mullins
(name of alteration organization) (authorized representative)

CERTIFICATE OF INSPECTION

I, James R. Myhan, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of Tennessee and employed by Kemper National Insurance Co's of Long Grove, IL have inspected the work dedcribed in this report on Dec. 2, 1995 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 loss of any kind arising from or connected with this inspection.

Date 2-27, 19 96 Signed James R. Myhan Commissions NB 10822A, TN 2693
(inspector) (National Board (incl endorsements), and jurisdiction, and no.)