

**FORM R-2 REPORT OF ALTERATION**  
in accordance with provisions of the *National Board Inspection Code*

EM  
(Authorized Rep. initials)

RG  
(Inspectors initials)

54  
(Form "R" Registration no.)  
244930  
(P.O. no., job no., etc.)

1a. DESIGN PERFORMED BY: J. Lowry, LLC  
(name of "R" organization responsible for design)  
2222 Bay Area Blvd Suite 101, Houston, Tx 77058  
(address)

1b. CONSTRUCTION PERFORMED BY: Premier Boiler & Combustion, LLC  
(name of "R" organization responsible for construction)  
788 Old Mill Road Ringgold, Ga 30736  
(address)

2. OWNER OF PRESSURE RETAINING ITEM: Soffix Corp.  
(name)  
101 Northgate Commercial Center, Chattanooga, Tn 37415  
(address)

3. LOCATION OF INSTALLATION: Soffix Corp.  
(name)  
2800 Riverfront Road, Chattanooga, Tn 37406  
(address)

4. ITEM IDENTIFICATION: Pressure Vessel NAME OF ORIGINAL MANUFACTURER: Alloy Fabricators  
(boiler, pressure vessel, or piping)

5. IDENTIFYING NOS: 1-141 1266 1992  
(mfg. serial no.) (National Board no.) (jurisdiction no.) (other) (year built)

6. NBIC EDITION/ADDENDA: 1989  
(edition) (addenda)

Original Code of Construction for Item: ASME Sect VIII Div 1 1989  
(name / section / division) (edition / addenda)

Construction Code Used for Alteration Performed: ASME Sect VIII Div 1 2023  
(name / section / division) (edition / addenda)

7a. DESCRIPTION OF DESIGN SCOPE: ☐ Form R-4, Report Supplementary Sheet is attached

Half pipe jacket was re-rated from a M.A.W.P. of 33 PSI at 335F to 90 PSI at 335F

7b. DESCRIPTION OF CONSTRUCTION SCOPE: ☐ Form R-4, Report Supplementary Sheet is attached

Liquid Pressure Test, if applied 120 psi MAWP 90 psi



54

(Form "R" Registration no.)

244930

(PO no., job no., etc.)

8. REPLACEMENT PARTS: (Attached are Manufacturer's Partial Data Reports or Form R-3's properly completed for the following items of this report):  
(name of part, item number, data report type or Certificate of Compliance, mfg's name and identifying stamp)

9. REMARKS:

Half pipe jacket re-rated from a M.A.W.P. of 33 PSI at 335F to 90 PSI at 335F

#### DESIGN CERTIFICATION

I, Eugene Mitchem, 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. \_\_\_\_\_ expires on \_\_\_\_\_

Date 6/28/24 Signed [Signature]  
(name of design organization) (authorized representative)

#### CERTIFICATE OF DESIGN CHANGE REVIEW

I, STEVE ALEXANDER, holding a valid Commission issued by The National Board of Boiler and Pressure Vessel Inspector and certificate of competency, where required, issued by the jurisdiction of TN and employed by BUREAU VERITAS of LYNN, MA

have reviewed the design change as described in this report and state that to the best of my knowledge 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 6-28-24 Signed [Signature] Commissions NB-12488R  
(inspector) (National Board and jurisdiction no. including endorsement)

#### CONSTRUCTION CERTIFICATION

I, Eugene Mitchem, 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. 11409 expires on May, 27, 2026

Date 6/28/24 Signed [Signature]  
(name of alteration organization) (authorized representative)

#### CERTIFICATE OF INSPECTION

I, \_\_\_\_\_, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and certificate of competency, where required, issued by the Jurisdiction of \_\_\_\_\_ and employed by Bureau Veritas Insurance and Inspection Co. of Lynn, 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 loss of any kind arising from or connected with this inspection.

Date \_\_\_\_\_ Signed \_\_\_\_\_  
(inspector) (National Board and jurisdiction no. including endorsement)



## TRAVELER

☐ ASME "U" ☒ NB Repair / Alteration Code/NBIC Edition: 2023 Year Built: 1992  
☐ ASME "S" Original Mfg.: Alloy Fabricators S/N: 1-141 NB#: 1266

CUSTOMER: Sofix Corp. Chattanooga, TN JOB NO. 244930

DESCRIPTION: Re-rate half pipe Jacket from 38 psi to 90 psi

DRAWING NO.: EQUIPMENT NO. DATE: 6/25/24

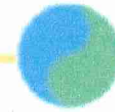
SCOPE	QUALITY CONTROL	DATE	AUTHORIZED INSPECTOR	DATE	HOLD	NCR #
DESIGN REVIEW:						
DRAWINGS						
CALCULATIONS	EM	6/25/24	SAF RY RLG	6-28-24		
SPECIAL INSTRUCTION						
TRAVELER REVIEW						
MATERIAL INSPECTION:						
MAT'L LIST COMPLETE						
MTR'S CHECKED						
OTHER						
FABRICATION INSPECTION:						
NOZZLE FITUP						
GIRTH SEAM FITUP						
LONG SEAM FITUP						
INTERNAL PRIOR TO CLOSING						
WELDER QUALIFICATION						
PREHEAT REQUIREMENTS						
PWHT REQUIREMENTS						
PWHT RECEIVING INSPECTION						
PWHT CHARTS REVIEWED						
WELD SYMBOLS						
VISUAL INSPECTION						
OTHER						
RT: FULL ( ) SPOT ( ) _____ %						
MT ( ) PT ( ) UT ( ) VT ( )						
HYDROTEST @ <u>120</u> PSI	EM	6-28-24	J. Alpha	6-28-24		
GAUGE NO. <u>PBC-005</u>	EM	6-28-24				
GAUGE CAL. DATE <u>8-31-23</u>	EM	6-28-24				
OTHER						
FINAL						
FINAL INSPECTION						
NCR's CLOSED						
DATA REPORT	EM	6/25/24	J. Alpha	6-28-24		
STAMPING	EM	6/25/24	J. Alpha	6-28-24		
NAME PLATE ATTACHED	EM	6/25/24	J. Alpha	6-28-24		

(\*) AI HOLD POINT

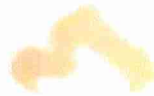
***Volunteer NDT Corporation***

Chattanooga, Tennessee

*Providing Inspection & Scaffolding Services*



**Tank Inspection C5112**



**Premier Boiler**

VNDT Job # 24131

Procedure: TST-VT-001

TST-UT-001

External Visual: Performed

Internal Visual: Not Available

Thickness: Various

Retirement: No retirement or predictions are given  
because there is no historical data on the vessel. No U1  
Manufacturers Data Sheet was found to have a comparison.  
Only a baseline was given at this time.

Volunteer Review By:

*Heath Watson*

Date: 5/29/2024

Volunteer NDT Level III



# Volunteer NDT Corporation

Chattanooga, Tennessee

Providing Inspection & Scaffolding Services



Premier Boiler @ Sofix

Chattanooga, TN

5/24/2024

Tech: Heath Watson

TST-UT-001

SS-Wedge-SN 2298-19

GE- FH2E S/N: 23A015W5

Krautkramer DMS-2

>100 Ft Candles-Streamlight

## Summary:

## C-5112

This was a stainless steel tank with a stainless jacket of coils. The orientation of the readings of this tank were inspection ports at the following locations. The top head had 2 inspection ports. The shell had 4 shell readings with 4 jacket readings taken. The bottom head had 2 inspection ports.

LOCATION	N	S	E	W	Average	Low
Top Head	.261	.305	.251	.268	.271	.251
Shell Course	.259	.261	.257	.258	.259	.257
Bottom Head	.258	.264	.263	.258	.261	.258







# Premier Boiler & Combustion, LLC

## PRESSURE TEST REPORT

☐ Repair ☒ Alteration No. R-54 Date: 6/28/24 Job Number: 244930

☐ Routine Repair ☐ Piping Install / Replacement

NBIC Edition: 2023 Addenda: N/A Other: \_\_\_\_\_

Original MFG: Alloy Fabricators Year Build: 1992

Serial No.: 1-141 Nat'l. BD. No.: 1266

Description of Work: Re-rate half pipe jacket from 33 psi to 90 psi

Location of Work: Sofix Corp. Chattanooga

AIA Inspector Approval & Acceptance Req'd? YES ☒ NO ☐

Verified by: [Signature] Date: 6-28-24

### Requirements

Test Medium	Water <input checked="" type="checkbox"/>	Glycol <input type="checkbox"/>	Air <input type="checkbox"/>	Other <input type="checkbox"/>
Conforms to Drawings, Codes & Specifications?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
System Cleared by Quality Control?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
Valves Opened and/or Closed as Required?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
Valve Orientation Correct & Verified?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
Blinds Installed or removed as Required?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	
In Line Instruments Removed or Bypassed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	

### Pressure Test Data

Gauge Number	PBC - <u>005</u>	Design MAWP	<u>90</u> PSI
Gauge Make	<u>Bourdon</u>	Ambient Temperature	<u>85</u> °F
Gauge Range	0 - <u>300</u> PSI	Required Test Pressure	<u>120</u> PSI
Gauge Calibrated	Date <u>8-30-23</u>	Actual Test Pressure	<u>120</u> PSI
Start Time	<u>0930, 6-27-24</u>	Hold Time Required	10 Min
Finish Time	<u>0930, 6-28-24</u>	Actual Hold Time	<u>24 hrs</u> - Min

### Post Pressure Test

Blinds removed and accounted for?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Spring hanger stops removed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Guides Installed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Correct bolts and gaskets reinstalled?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
High point and Low point plugs installed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Control Valves Installed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Check Valve internals installed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
System blown free of test medium?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### Acceptance of Repair / Alteration Pressure Test:

Premier Boiler Supervisor \_\_\_\_\_ Date: \_\_\_\_\_

Quality Control Manager [Signature] Date: 6-28-24

Repair Inspector [Signature] Date: 6-28-24

**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 and certified by ALLOY FABRICATORS, INC., 102 S. INDUSTRIAL DR., TRENTON GA  
(Name and address of manufacturer)

2. Manufactured for SOFIX CORP., 101 NORTHGATE COMMERCIAL CTR., CHATTANOOGA, TN  
(Name and address of purchaser)

3. Location of installation SOFIX CORP., 2800 RIVERPORT RD., CHATTANOOGA, TN  
(Name and address)

4. Type VERTICAL 1-141 N/A 1-141 1206 1992  
(Vessel or part, tank) (Major serial No.) (CRN) (Drawing) (Inst. Bd. No.) (Year built)

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 1989  
Year

1989 N/A N/A  
Addenda (Ident.) Code Case No. Special service per UG (201d)

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

6. Shell: SA-240-T304 .250 NONE 3' 3 1/2" 8' 5 13/16"  
(Matl. (Spec. No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (Overall) (ft. & in.))

7. Seams: SVBW NONE 70% N/A  
(Long. (Dist. Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))

N/A SVBW NONE 1  
(Time) (Grth. (Dist. Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)

8. Heads: (a) Matl. SA-240-T304 (b) Matl. SA-240-T304  
(Spec. No., Grade) (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	.250	NONE	---	---	---	---	---	---	CONCAVE
(b)	BOTTOM	.250	NONE	---	---	---	---	---	---	CONCAVE

If removable, bolts used (describe other fastenings) N/A  
(Matl. Spec. No. Gr. Size No.)

9. Type of Jacket N/A Proof Test N/A

10. Jacket Closure --- If bolted, give dimensions --- If bolted, describe or sketch.

11. MAWP 33 psi at max. temp. 335 °F. Min. design metal temp. -20 °F at 33 psi.  
Hydro., pneu., or comb. test press. 57 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: N/A  
Stationary Matl. (Spec. No., Gr.) Diam. (in.) (Subject to pressure) Nom. Thk. (in.) Corr. Allow. (in.) Attach (Welded, Bolted)

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Floating Matl. (Spec. No., Gr.) Diam. (in.) Nom. Thk. (in.) Corr. Allow. (in.) Attach

13. Tubes: --- O.D. (in.) Nom. Thk. (in. or Gauge) --- Type (Straight or 'U')

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

14. Shell: --- --- --- --- ---  
(Matl. (Spec. No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (Overall) (ft. & in.))

15. Seams: --- --- --- ---  
(Long. (Dist. Sngl.)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (°F))

--- --- --- ---  
(Time) (Grth. (Dist. Sngl.)) (R.T. (Spot, Partial, or Full)) (No. of Courses)

16. Heads: (a) Matl. --- (b) Matl. ---  
(Spec. No., Grade) (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) ---  
(Matl. Spec. No. Gr. Size No.)

17. MAWP --- psi at max. temp. --- °F. Min. design metal temp. --- °F at --- psi.  
Hydro., pneu., or comb. test press. --- psi.

## Form U-1 (Back)

## 18. Nozzles, Inspection and Safety Valve Openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Size or Size	Type	Matl.	Thk.	Reinforcement (Matl.)	How Attached	Location
LIQ IN	N1	2"	150#RFSO	SA182 F304	SCH 40	---	WELDED	TOP HEAD
LIQ OUT	N2	1 1/2"	PAD FLG	SA276 T304	---	---	WELDED	BTM HEAD
30PA INLET	N3	1"	150#RFSO	SA182 F304	SCH 40	---	WELDED	TOP HEAD
VENT	N4	1 1/2"	150#RFSO	SA182 F304	SCH 40	---	WELDED	TOP HEAD
TG	N5	1"	150#RFSO	SA182 F304	SCH 40	---	WELDED	SHELL
SPARE	N6	2"	150#RFSO	SA182 F304	SCH 40	---	WELDED	TOP HEAD
SGT GLASS	N7	2 1/2 X 12"	80	SA240 T304	---	---	WELDED	SHELL
LGT GLASS	N8	4"	150#RFSO	SA240 T304	---	---	WELDED	TOP HEAD
40S INLET	N9	1 1/2"	150# RFSO	SA182 F304	SCH 40	---	WELDED	SHELL/TOP HEAD
40SC OUTLET	N10	1 1/2"	150# RFSO	SA182 F304	SCH 40	---	WELDED	SHELL/TOP HEAD
RELIEF	N11	2"	150# RFSO	SA182 F304	SCH 40	---	WELDED	TOP HEAD

19. Supports: Skirt NO Lugs 0 Legs 4 Other N/A Attached WELDED TO SHELL  
 (Yes or no) (No) (No) (Describe) (Where and how)

20. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N12 - HANDHOLE, 6", 150#RFSO, SA182 F304, SCH 40, WELDED TO TOP HEAD, FABRICATED BY AFI  
 (Name of part, item number, mfr's name and identifying stamp)

SHELL HALF PIPE JACKET: CONSTRUCTED OF 2" SCH 10 SA 312 PIPE TP304

MAWP: 44 PSI AT 335° F MMT: -20° F AT 44 PSI HYDROSTATICALLY TESTED AT 75 PSI

BTM HEAD HALF PIPE JACKET: SAME SPECIFICATIONS AS LISTED FOR SHELL HALF PIPE JACKET

## CERTIFICATE OF SHOP 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.

"U" Certificate of Authorization No. 7,251 expires 04/28 19 93  
 Date 1-10-92 Co. name ALLOY FABRICATORS, INC. Signed [Signature]  
 (Manufacturer) (Representative)

## CERTIFICATE OF SHOP INSPECTION

Vessel constructed by ALLOY FABRICATORS, INC. at 102 SO. INDUSTRIAL DR., TRENTON, GA

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of GA and employed by KEMPER NATIONAL INSURANCE COMPANIES

of LONG GROVE, ILLINOIS have inspected the pressure vessel described in this Manufacturer's Data Report on JAN. 10, 19 92, 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 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 JAN. 10, 1992 Signed [Signature] Commissions NB10822 GA00268  
 (Authorized Inspector) (Nat'l Board, State, Province and No.)

## CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

"U" Certificate of Authorization No. 7,251 expires 04/28 19 93  
 Date 1-10-92 Co. name ALLOY FABRICATORS, INC. Signed [Signature]  
 (Assembler that certified and constructed field assembly) (By Representative)

## 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 of GA and employed by KEMPER NATIONAL INSURANCE COMPANIES

of LONG GROVE, ILLINOIS 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 ASME Code, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of 75 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 1-10-92 Signed [Signature] Commissions NB10822 GA00268  
 (Authorized Inspector) (Nat'l Board (incl. endorsement) State, Prov., and No.)