6" Ta Heat Exch. H-2029
Unit Description
PJ-95349
P.O. Number:

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by TITAN METAL FABRICATORS, 352 Balboa Circle, Camarillo, California, 93012
(Name and address of Manufacturer)

2. Manufactured for Trinity Manufacturing, Inc., PO Box 1519, Hamlet, North Carolina, 28345
(Name and address of Purchaser)

3. Location of Installation Trinity Manufacturing, Inc., 11 EV Hogan Drive, Hamlet, North Carolina, 28345
(Name and address)

4. Type: Vert. Heat Exchanger (Horizontal or vertical, tank) | **26343-1-1** (Manufacturer's serial number) | --- (CRN) | 26343-1-1-01, Rev. 0 (Drawing number) | **1954** (National Board number) | 2018 (Year built)

5. ASME Code, Section VIII, Division 1: 2017/ N/A [Edition and Addenda, if applicable (date)] | N/A (Code Case numbers) | --- [Special service per UG-120(d)]

6. Shell: SA-106, Gr. B* (Material spec. number, grade) | .280 in (Nominal thickness) | .062 in (Corr. allow.) | 0' 6.065" (ID) (Inner diameter) | 11' 9.585" [Length (overall)]

Body Flanges on Shells

No.	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Location	Bolting			
									Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

7. Seams: Smls. Type S [Long. (welded, dbl., sngl., lap, butt)] | None [R.T.(spot or full)] | 70% (Eff.,%) | N/A (H.T. temp) | N/A (Time, hr) | Wld, Corner Jt., Type 7 [Girth. (welded, dbl., sngl., lap, butt)] | None [R.T. (spot or full)] | 70% (Eff., %) | 3* (No. of courses)

8. Heads: (a) Material SA-516, Gr.70 (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)	Ends	.125	0	N/A	N/A	N/A	21	N/A	N/A	Concave

Body Flanges on Heads

	Location	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Bolting			
									Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
(a)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**		**N/A**	**N/A**	**N/A**

9. MAWP 100 psi (Internal) | 15 psi (External) at max. temp. 350 °F (Internal) | 350 °F (External)

Min. design metal temp. -20 °F at 100 psi. Hydro, pneu., or comb. test pressure HYDRO at 130 psi.

Proof test N/A.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Shellside Inlet & Outlet	**2**	**1-1/2"**	**150# RFSO**	**SA-106-B**	**SA-105**	**.200**	**.062**	**---**	**Fig. UW-16.1(c)**	**Fig. UW-21(1)**	
Shellside Vent & Drain	**2**	**3/4"**	**Half Coupling**	**SA-105**	**---**	**3000#**	**.062**	**---**	**Fig. UW-16.1(c)**	**---**	
Process Outlet	**1**	**2"**	**150# RFSO**	**SA-106-B**	**SA-105**	**.218**	**0**	**---**	**UW-12, Type 1**	**Fig. UW-21(1)**	
Process In/Outlets	**2**	**4"**	**150# RFSO**	**SA-106-B**	**SA-105**	**.237**	**0**	**---**	**UW-12, Type 1**	**Fig. UW-21(1)**	

11. Supports: Skirt **No** (Yes or no) Lugs 2 (Number) Legs 0 (Number) Other **(2) Support Lugs** (Describe) Attached **Shell / Welded** (Where and how)

12. Remarks: Manufacturer's 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, Manufacturer's name and identifying stamp)

***Shell length includes a .036" thk. x 3-1/4" lg. SB-443 N06625 expansion joint bellows element designed and constructed to the rules of Appendix 26. Design cycle life: 2000 cycles; axial movement: + 0.105 / - 0.006"; axial spring rate: 8442.3 lb/in. Tubesheets made from 1.375" thk. x 11" OD SA-516-70 plate. Pressue relief devices are the responsibility of the end user per UG-125. Impact test exemptions per UG-20(f), UNF-65 & UCS-66(b,c). Inspection openings omitted per UG-46(a).**

Manufactured by TITAN METAL FABRICATORS, 352 Balboa Circle, Camarillo, California, 93012

Manufacturer's Serial No. **26343-1-1** CRN --- National Board No. **1954**

CERTIFICATE OF SHOP/FIELD 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 BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. "U" Certificate of Authorization Number 33778 expires July 11, 2020 .

Date 12/06/2018 Co. name **TITAN METAL FABRICATORS** (Manufacturer) Signed (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by **TITAN METAL FABRICATORS** at **352 Balboa Circle, Camarillo, California, 93012**

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and employed by The Hartford Steam Boiler Inspection and Insurance Company, of Hartford, CT

have inspected the component described in this Manufacturer's Data Report on December 6, 2018 , and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 12/06/2018 Signed (Authorized Inspector) Commissions 14507, CA2161, HAW253, NV1855, AZ514 (National Board Authorized Inspector Commission number)