

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

- Manufactured and certified by **Ward Tank & Heat Exchanger Corp., 6670 E. W.T. Harris Boulevard, Charlotte, North Carolina, 28215**
(Name and address of Manufacturer)
- Manufactured for **Evonik Degussa Corporation, PO Box 868, Theodore, Alabama, 36590**
(Name and address of Purchaser)
- Location of Installation **Evonik Degussa Corporation, 4201 Degussa Rd., Theodore, Alabama, 36590**
(Name and address)
- Type **Vertical** **WC-9192** **N/A** **2015-WC-9192 Rev. 5** **5166** **2016**
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year built)
- ASME Code, Section VIII, Division 1 **2013/ N/A** **N/A** **N/A**
(Edition and Addenda, if applicable (date)) (Code Case numbers) (Special service per UG-120(d))
- Shell: **SA240 316** **.375"** **0 in** **4' (ID)** **11' 6"**
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner diameter) (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	N/A

- Seams: **1** **Spot** **85%** **N/A** **N/A** **1,3** **Spot** **85%** **1**
[Long. (welded, dbl., sngl., lap, butt)] [R.T. (spot or full)] (Eff. %) (H.T. temp) (Time, hr) [Girth. (welded, dbl., sngl., lap, butt)] [R.T. (spot or full)] (Eff. %) (No. of courses)

- Heads: (a) Material **SA240 316** (b) Material **SA240 316**
(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	.220"	0	48"	3	N/A	N/A	N/A	N/A	Concave
(b)	Bottom	.1875"	0	48"	3	N/A	N/A	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	N/A	N/A

- MAWP **45 psi** **15 psi** at max. temp. **482 °F** **482 °F**
(Internal) (External) (Internal) (External)
- Min. design metal temp. **-20 °F** at **FVI/45** Hydro, pneu., or comb. test pressure **HYDRO at 90 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	
Vent off gas, Liquid inlet	4	1"	150# RFWN	SA312 TP316	SA182 F316	.133"	0		Welded	Welded	Head
Press transmitter, Nitrogen	2	1"	150# RFWN	SA312 TP316	SA182 F316	.133"	0		Welded	Welded	Head
Temp Trans, conn. for A5, A6, A8	4	1.5"	150# RFWN	SA312 TP316	SA182 F316	.145"	0		Welded	Welded	Head
Liquid Inlet	2	1.5"	150# RFWN	SA312 TP316	SA182 F316	.145"	0		Welded	Welded	Head
Spare w/bld, Liq. out, in	3	2"	150# RFWN	SA312 TP316	SA182 F316	.154"	0	SA240 316	Welded	Welded	2-Head, 1-Shell
Connection for A1	1	2"	150# RFWN	SA312 TP316	SA182 F316	.154"	0	SA240 316	Welded	Welded	Head
Emergency Pressure Relief	1	3"	150# RFWN	SA312 TP316	SA182 F316	.216"	0	SA240 316	Welded	Welded	Head
Level switch high, Level	2	3"	150# RFWN	SA312 TP316	SA182 F316	.216"	0		Welded	Welded	Head
Connection for L1	1	4"	150# RFWN	SA312 TP316	SA182 F316	.237"	0		Welded	Welded	Head
Manway w/Cover & Davit	1	24"	150# RFWN	SA240 316	SA182 F316	.250"	0		Welded	Welded	Shell

- Supports: Skirt **No** Lugs **4** Legs **N/A** Other **N/A** Attached **Shell Welded**
(Yes or no) (Number) (Number) (Describe) (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)

The customer is responsible for the pressure relief device as per UG-125a.

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 **18365** expires **February 17, 2017**

Date **01/11/2016** Co. name **Ward Tank & Heat Exchanger Corp.** Signed  (Manufacturer) (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by **Ward Tank & Heat Exchanger Corp.** at **6670 E. W.T. Harris Boulevard, Charlotte, North Carolina, 28215**
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 Connecticut, of Hartford, CT**

have inspected the component described in this Manufacturer's Data Report on **January 11, 2016** 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 **01/11/2016** Signed  (Authorized Inspector) Commissions **13793A, NC1585, TN4119, VA1142**
(National Board [incl. endorsements])

No. 5166



FABRICATED & CERTIFIED BY
WARD TANK & HEAT EXCHANGER CORP, CHARLOTTE, N.C.

W
RT-4

SHELL	MAWP: FV/45	PSI@ 482 °F
JKT./TUBE SIDE	MAWP: ---	PSI@ --- °F
SHELL	MDMT: -20 °F@ FV/45	PSI
JKT./TUBE SIDE	MDMT: --- °F@ ---	PSI

TEST PRESS.	SHELL: 90	PSI	JKT./TUBE SIDE: ---	PSI
MFGR. S.N.	WC-9192		YR. BUILT: 2016	
CUSTOMER	EVONIK CORP. - THEODORE AL			
P.O. NO.	4700898293		DATE: 1/6/15	
NOMENCLATURE	CRUDE OIL FEED TANK			
EQUIP. NO.	V-4310			
	48 IN ID X 138 IN			

SHELL MAWP FV/45 TO BAR AT 250 °C
MDMT -28.9 °C AT FV/45 TO BAR
SHIPPING WT 10,500 LBS
TEST WT 5350 LBS