

# 106830

**FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS** Owner Item#  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 E-201

Manufactured and certified by TUBERATE Ltd. 763 Chester St. Sarnia, Ont. N7S-5N2 Canada

(Name and address of Manufacturer)

Manufactured for Huntsman Corporation 2701 S. Range Road Marysville, Michigan 48040 U.S.A.

(Name and address of Purchaser)

Location of installation Huntsman Corporation 2701 S. Range Road Marysville, Michigan 48040 U.S.A.

(Name and address)

Type: Horizontal Reactor Overhead Condenser 5457A --- 5457-D1 R3 25 1997  
(Horiz., vert., or sphere) (Tank, separator, jkt, vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

ASME Code, Section VIII, Div. 1 95 Ed and 95 Add.

Edition and Addenda (date)

Code Case No.

Special Service per UG-120(d)

ns 6 - 11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi-chamber vessels.

Shell (a) No. of course(s): 2 (b) Overall length (ft & in.): 20'-0" TSA to TSB

No.	Course(s)		Material		Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
	Diameter, in.	Length (ft & in.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	3'-0" ID	10'-0"	SA 516-70		3/4"	1/8"	1	Spot	0.85	1	Spot	0.85	None	
2	3'-0"	9'-4 5/8"	SA 516-70		3/4"	1/8"	1	Spot	0.85	1	Spot	0.85	None	

Heads: (a) None

(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

(b) None

(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

No.	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	N/A													
(b)														

removable, bolts used (describe other fastening) None

Type of jacket None

(Mat'l Spec. No., Grade, size, No.)

Jacket closure N/A

bar, g dimensions N/A

(Describe as ogee & weld, bar, etc.)

MAWP 430 psi at max. temp. 210 °F Min. design metal temp. -20 °F at 430 psi.  
(internal) (external) (internal) (external)

Impact test Exempt per UG-20 (f)

(Indicate yes or no and the component(s) impact tested)

Hydro., pneu., or comb. test press. Hydro-645 psig Proof test N/A

ns 12 and 13 to be completed for tube sections.

Tube sheet: SA-240-TP304 44 1/2" OD 3 3/4" 0 Welded  
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)  
SA 240-TP-304 44 1/2" 3 3/4" 0 Welded  
Floating (Mat'l Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment  
Tubes: SA-249 TP-304 3/4" 14 BWG 1056 Straight  
Mat'l Spec. No., Grade or Type O.D., in. Nom. thk., in. or gauge Number Type (Straight or U)

ns 14 - 18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

Shell (a) No. of course(s): 2 (b) Overall length (ft & in.): TSA End- 3'-9 5/8" TSB End- 3'-5 1/2"

No.	Course(s)		Material		Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
	Diameter, in.	Length (ft & in.)	Spec./Grade or Type		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	36" ID	1'-11 3/8"	SA-240 TP304		3/4"	0	1	Full	1.0	1	Full	1.0	None	
2	36" ID	2'-3 1/2"	SA-240 TP304		3/4"	0	1	Full	1.0	1	Full	1.0	None	

Heads: (a) SA-240 TP-304

(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

(b) SA-240 TP-304

(Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

No.	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	TSA-End	0.656"	0			2:1						1	Full	1.0
(b)	TSB-End	0.656"	0			2:1				X		1	Full	1.0

removable, bolts used (describe other fastening) SA-193 Gr.B7 1 3/8"  $\phi$  36 per Channel - 72 Total

(Mat'l Spec. No., Grade, Size, No.)



Impact test: Exempt per UHA-51 (d)

Nozzles, inspection, and safety valve openings;

Supports: Skirt No Lugs None Legs None Others 2-Saddles Attached Welded to Shell  
(Yes or No) (No.) (No.) (Describe) (Where and How)

Remarks:

\*\* - SA-182 F304      \*\*\* - UW-16.1 butt      NOTE: No Inspection Openings Refer to UG-48

(Representative)

(Nat'l Board incl. endorsement, State, Province and No.)

(Representative)

(Natl Board incl. endorsement, State, Province and No.)