

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 INDUSTRIES, 200 RYAN STREET, SOUTH PLAINFIELD, NEW JERSEY 07080
 (Name and address of Manufacturer)

2. Manufactured for MERCK & COMPANY, INC., RAHWAY, NJ 07065
 (Name and address of Purchaser)

3. Location of installation MERCK & COMPANY, INC., ALBANY, GA 31705
 (Name and address)

4. Type: VERTICAL JACKETED VESSEL 4176 D-2856-B 2750 2002
 (Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 2000, 2001 NONE
 Edition and Addenda (date) Code Case No. Special Service per UG-120(d)

APPENDIX EE HPCJ

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

6. Spool (a) No. of course(s): (18) TURNS @ 4 9/16" (b) Overall length (ft & in.): 7'-1 5/8"

HALF PIPE Course(s)	Material		Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment		
	No.	Diameter, in. Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
2	1.75" R	188'-2"	SB-168 INCO 800	.109	0	8	NONE	45	3	NONE	80	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

7. Spools: (a) SB-167 INCO 800 (b) -
 (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

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
(a) BOTTOM	.102"	0	1.75" R	-	-	-	-	CONVEX	ONCAV	8	NONE	45
(b)	-	-	-	-	-	-	-	-	-	-	-	-

If removable, bolts used (describe other fastening) -
 (Mat'l Spec. No., Grade, size, No.)

8. Type of jacket 3" FULL HPCJ ON 4 1/2" PITCH Jacket closure PIPE WELDED
 (Describe as ogee & weld, bar, etc.)

If dimensions - If bolted, describe or sketch.

9. MAWP 150 FV psi at max. temp. 400 - °F Min. design metal temp. -20 °F at 180 psi.
 (Internal) (external)

10. Impact test JKT EXEMPT FROM IMPACT PER UNF-65 at test temperature of - °F
 (Indicate yes or no and the component(s) Impact tested)

11. Hydro. ~~press.~~ test press. 195 Proof test UG-101(a)

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: Stationary (Mat'l Spec. No.) - Dia., in. (subject to press.) - Nom. thk., in. - Corr. Allow., in. - Attachment (welded or bolted) -

Floating (Mat'l Spec. No.) - Dia., in. - Nom. thk., in. - Corr. Allow., in. - Attachment -

13. Tubes: Mat'l Spec. No., Grade or Type - O.D., in. - Nom. thk., in. or gauge - Number - Type (Straight or U) -

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

14. Shell (a) No. of course(s): 1 (b) Overall length (ft & in.): 8'-3"

Course(s)	Material		Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment		
	No.	Diameter, in. Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	78" O.D.	7'-9"	SA-403 316L	.5"	0	1	SPOT	85	1	SPOT	85	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

15. Heads: (a) SA-240 316L (b) SA-240 316L
 (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

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
(a) TOP	.373"	0	-	-	2:1	-	-	CONVEX	ONCAV	8	NONE	45
(b) BOTTOM	.3879"	0	-	-	2:1	-	-	CONVEX	ONCAV	8	NONE	45

If removable, bolts used (describe other fastening) -
 (Mat'l Spec. No., Grade, size, No.) UL 15 2002

PROJECT # 01095
 DESIGN # 1102
 TAG # TA-411

16. MAWP 150 PV psi at max. temp. 400 400 °F Min. design metal temp. -20 °F at 150 psi
 (internal) (external) (internal) (external)

17. Impact test VESSEL EXEMPT FROM IMPACT TEST PER UHA-51 (d) & (e) at test temperature of _____
 (Indicate yes or no and the component(s) impact tested)

18. Hydro. gases, essence test press. 209 Proof test _____

19. Nozzles, inspection, and safety valve openings: SAFETY VALVE ELSEWHERE IN SYSTEM FIGURES UW 16.1 2-4

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	* How Attached		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
MANWAY	1	18"-150	RINGS	SA-240 316L	SA-516 70	.375"	0	SA-240 316L	TYPE h	TYPE 10	TOP HEAD
AGIT MT	1	2"-150	SO	SA-240 316L	SA-105	.375"	0	SA-240 316L	TYPE h	TYPE 3	-
S. GLASS	1	4"-150#	PAD	SA-240 316L	-	1.25"	0	-	TYPE d	-	TOP HEAD
DRAIN	1	4"-150#	PAD	SA-240 316L	-	1.4375"	0	-	TYPE d	-	-
PROCESS	8	4"-150#	LJ	SA-312TP316L	SA-105	SCH 40	0	SA-240 316L	TYPE h	TYPE 1	-
PROCESS	1	0"-150	LJ	SA-312TP316L	SA-105	SCH 40	0	SA-240 316L	TYPE h	TYPE 1	-
PROCESS	1	8"-150#	LJ	SA-312TP316L	SA-105	SCH 40	0	SA-240 316L	TYPE h	TYPE 1	-

20. Supports: Skirt _____ Lugs _____ Legs 4 Others _____ Attached BTM HEAD, WELDED
 (Yes or No) (No.) (No.) (Describe) (Where and How)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report
 (List the name of part, item number, mfg's. name and identifying number)

22. Remarks: VESSEL TO BE USED AS A 2000 GAL. JKT'D VACUUM RECEIVER IN A CHEMICAL PROCESS
P.O. PX350653. ITEM #TA-411
NO NON-DESTRUCTIVE EXAMINATIONS WERE PERFORMED ON CAT. C & D WELDS

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. 7130 Expires 01/31/2005

Date 4/25/12 Name ALLOY INDUSTRIES Signed Frank J. Caswell
 (Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of NEW JERSEY and employed by ONE BEACON AMERICA INSURANCE COMPANY of BOSTON, MASSACHUSETTS have inspected the pressure vessel described in this Manufacturer's Data Report on APRIL 25, 2012, 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 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 4/25/2012 Signed [Signature] Commissions NB 7376A N2-790
 (Authorized Inspector) (Natl Board incl. endorsement, State, Province and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements in this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME Code, Section VIII, Division 1.

U Certificate of Authorization No. _____ Expires _____

Date _____ Name _____ Signed _____
 (Assembler) (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 the State or Province of _____ and employed by _____ of _____ 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 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 _____ 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 _____ Signed _____ Commissions _____
 (Authorized Inspector) (Natl Board incl. endorsement, State, Province and No.)

