

CME23505 POS#21400551

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

Form U-1

1. Manufactured and certified by Hooper Welding Enterprises Limited 1390 Advance Road Oakville, Ontario, Canada L6L 5L5  
(Name and address of Manufacturer)

.. Manufactured for CLARK RELIANCE CORP. 16633 FOLTZ IND. PARKWAY, STRONGSVILLE, OHIO  
(Name and address of Purchaser)

3. Location of Installation HOFFMAN LAROCHE, 206 ROCHE DR., BELVEDERE, N.J. 07823-1113  
(Name and address)

4. Type: VERT SCRUBBER 9507 51L-4942 REV 2 1111 1997  
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Std. No.) (Year Built)

5. ASME Code, Section VIII, Div. 1 1995 EDITION A95  
Edition and Addenda (date) Code Case No. Special Service per UG-120 (d)

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. Shell: (a) No. of course(s): 3 (b) Overall length (ft & in.): 14'-10"

No.	Course(s)		Material Spec./Grade or Type	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
	Diameter, in.	Length (ft & in.)		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	29.5 I.D.	1'-6 9/16"	SA240-316L	.25	.063	1	NONE	70%	1	NONE	70%	NONE	NONE
2	29.5 I.D.	7'-7 7/8"	SA240-316L	.25	.063	1	NONE	70%	---	NONE	---	NONE	NONE
3	47.25 I.D.	4'-3"	SA240-316L	.375	.063	1	NONE	70%	1	NONE	70%	NONE	NONE

7. Heads: (a) SA240-316L (b) SA240-316L  
(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	Eff.
(a)	TOP	.270	.063	30.00	1.80	2:1	---	---	---	---	YES	S	NONE	85%
(b)	BOTTOM	.367	.063	48.00	2.88	2:1	---	---	---	---	YES	S	NONE	85%

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

8. Type of Jacket \_\_\_\_\_ Jacket Closure \_\_\_\_\_  
(Describe as ogee & weld, bar, etc.)  
If bar, give dimensions \_\_\_\_\_ If bolted, describe or sketch \_\_\_\_\_

9. MAWP 25 \_\_\_\_\_ psi at max. temp. 150 \_\_\_\_\_ °F Min. design metal temp. -20 °F at 25 psi.  
(internal) (external) (internal) (external)

10. Impact test EXEMPT PER UHA51(A)  
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. 38 PSI Proof test \_\_\_\_\_  
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): \_\_\_\_\_ (b) Overall length (ft & in.): \_\_\_\_\_

No.	Course(s)		Material Spec./Grade or Type	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
	Diameter, in.	Length (ft & in.)		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time

15. Heads: (a) \_\_\_\_\_ (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	Eff.
(a)														
(b)														

If removable, bolts used (describe other fastening) \_\_\_\_\_  
(Mat'l Spec. No., Grade, Size, No.)

**FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET**  
 As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

Form U-4

1. Manufactured and certified by Hooper Welding Enterprises Limited 1390 Advance Road Oakville, Ontario, Canada L6L 6L6  
 (Name and address of Manufacturer)

2. Manufactured for CLARK RELIANCE, 16633 FOLTZ IND. PKWY STRONGSVILLE, OHIO 44136  
 (Name and address of Purchaser)

3. Location of installation HOFFMAN LAROCHE, 206 ROCHE DR., BELVEDERE N.J 07823-1113  
 (Name and address)

4. Type VERT SCRUBBER 9507  
 (Horiz., vert. or sphere) (Tank, separator, heat exch., etc.) (Mfg's. serial No.)

Data Report Item Number (CRN) 51L-4942 REV 2 (Drawing No.) 1111 (Nat'l. Bd. No.) 1997 (Year built)

**Remarks**

Purpose ( Inlet, Outlet, Drain)	No.	Diameter	Type	Material	Nom. Thickness	Reinforcement Material	Hcw Attached	Location
VAPOR EXIT	1	8"	CL.150	SA312TP316L	SCH40S	INHERENT	UW15.1C	TOP HEAD
VAPOR SPRAY	1	2"	CL.150	SA312TP316L	SCH40S	INHERENT	UW15.1C	COLUMN
CIRC.	1	6"	CL.150	SA312TP316L	SCH40S	SA240-316L	UW15.1Q	COLUMN
LEVEL GAUGE	3	2"	CL.150	SA312TO316L	SCH40S	INHERENT	UW15.1C	SHELL
CAUSTIC	1	2"	CL.150	SA312TP316L	SCH40S	INHERENT	UW15.1C	SHELL
D.P. TRANSMITTER	2	3"	CL.150	SA312TP316L	SCH40S	INHERENT	UW15.1C	COLUMN
LEVEL TRANS	2	3"	CL.150	SA312TP316L	SCH40S	INHERENT	UW15.1C	SHELL

Certificate of Authorization: Type U No. 15380 Expires FEBRUARY 26 1999  
 Date SEPT 26 1997 Name Hooper Welding Enterprises Limited Signed [Signature]  
 (Manufacturer) (Representative)  
 Date Sept 26, 1997 Name [Signature] Commission Nat'l Bd 11457A  
 (Authorized Inspector) (Nat'l. Board incl. endorsement, State, Province and No.)