

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

1. Manufactured and certified by ELLETT INDUSTRIES LTD. 1575 KINGSWAY AVENUE PORT COQUITLAM BRITISH COLUMBIA V3C 4E5 CANADA
 (Name and address of Manufacturer)

2. Manufactured for Geneva Nitrogen LLC - 1165 North 1600 West, Vineyard, Utah 84057 USA
 (Name and address of Purchaser)

3. Location of installation Geneva Nitrogen LLC - 1165 North 1600 West, Vineyard, Utah 84057 USA
 (Name and address)

4. Type Horizontal Heat Exchanger 43890
 (Horizontal, vertical, or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Manufacturer's serial number)
none H4-1965-1 Rev.B 719 2008
 (CRN) (Drawing number) (National Board number) (Year built)

5. ASME Code, Section VIII, Div. 1 2007 Edition none none
 [Edition and Addenda (date)] (Code Case number) [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 multichamber vessels.

6. Shell: (a) Number of course(s) Three (b) Overall length 19' - 6 7/8"

No.	Course(s)		Material Spec./Grade or Type	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
	Diameter	Length		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	22" O.D.	8' - 0"	SA-240-304/L	3/16"	.0625"	1	Spot	0.85	1	Spot	0.85	-	-
1	22" O.D.	6' - 11 7/8"	SA-240-304/L	3/16"	.0625"	1	Spot	0.85	1	Spot	0.85	-	-
1	See Line 21	-	-	-	-	-	-	-	1	Spot	0.85	-	-

7. Heads: (a) _____ (b) _____
 (Material spec. number, grade or type) (H.T. - time & temp.) (Material spec. number, 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) _____

8. Type of jacket _____ (Material spec. number, grade, size, number)
 Jacket closure _____
 (Describe as ogee and weld, bar, etc.)
 If bar, give dimensions _____ If bolted, describe or sketch.

9. MAWP 75 psig at max. temp. 200°F Min. design metal temp. -20°F at 75 psig
 (Internal) (External) (Internal) (External)

10. Impact test No impact test required per UHA-51(d)(1)(a), UNF-65. at test temperature of _____
 [Indicate yes or no and the component(s) impact tested]

11. Hydro., pneu., or comb. test pressure 98 psig Proof test _____

Items 12 and 13 to be completed for tube sections.

12. Tubesheet SA-240-304/L, w/ SB-551 R60702 Ann cladding 26 1/2" Fin. Dia. 2 1/2" 0.0625" Welded
 [Stationary (material spec. no.)] [Diameter (subject to press.)] (Nominal thickness) (Corr. allow.) [Attachment (welded or bolted)]

13. Tubes SB-523 R60702 Smls (Ann.) 3/4" 18 BWG (0.049") A/W ** 237 Straight
 (Material spec. no., grade or type) (O.D.) (Nominal thickness) (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) Number of course(s) Two (b) Overall length 3' - 7 1/4"

No.	Course(s)		Material Spec./Grade or Type	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B, & C)			Heat Treatment	
	Diameter	Length		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	22" O.D.	1' - 9 5/8"	SA-240-304/L	1/4"	.0625"	1	Spot	0.85	1	Spot	0.85	-	-
1	22" O.D.	1' - 9 5/8"	SA-240-304/L	1/4"	.0625"	1	Spot	0.85	1	Spot	0.85	-	-

15. Heads: (a) SA-240-304/L (H.T. ---) (b) SA-240-304/L (H.T. ---)
 (Material spec. number, grade or type) (H.T. - time and temp.) (Material spec. number, grade or type) (H.T. - time and 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)	Left End	0.1875"	0.0625"	-	-	2:1	-	-	-	-	xxx	-	-	-
(b)	Right End	0.1875"	0.0625"	-	-	2:1	-	-	-	-	xxx	-	-	-

If removable, bolts used (describe other fastening) SA-193-B8 Cl.2, 3/4"-10NC x 8 1/4" lg. studs, 48 pcs, c/w SA-194-B nuts and S.S.I' washers.
 (Material spec. number, grade, size, number)

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16. MAWP 165 psig *** FV at max. temp. 550°F 550°F Min. design metal temp. -20°F at 165 psig / FV
 (Internal) (External) (Internal) (External)
 17. Impact test No impact test required per UHA-51(d)(1)(a), UNF-65. at test temperature of -
 [Indicate yes or no and the component(s) impact tested]
 18. Hydro., pneu., or comb. test pressure 215 psig Proof test -

19. Nozzles, inspection, and safety valve openings:

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	
Water Inlet/Outlet	2	8"	CL150WN	SA-312-TP304/L Smls	SA-182-F304/L	0.322"	0.0625"	SA-240-304/L	welded	welded	-
Gas Inlet	1	8"	CL150WN	SA-312-TP304/L Smls	SA-182-F304/L	0.322"	0.0625"	SA-240-304/L	welded	welded	-
Gas Outlet	1	8"	CL150WN	SA-312-TP304/L Smls	SA-182-F304/L	0.322"	0.0625"	SA-240-304/L	welded	welded	-
Drain/Pressure Indicator	5	1/2"	CPLG	-	SA-182-F304/L	3000#	0.0625"	-	-	welded	-
Temperature Indicator	2	3/4"	CPLG	-	SA-182-F304/L	3000#	0.0625"	-	-	welded	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

20. Supports: Skirt No Lugs - Legs - Others 2 Saddles Attached Welded to shell
 (Yes or no) (Number) (Number) (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, Manufacturer's name, and identifying number):
Bellow Exp. Joint, c/w stub ends, item 101, manufactured by Badger Industries, model no. 22-8LP-W5, mfg's S/N: 24096-A001. U-2A & U-4 attached.

22. Remarks * 9. MAWP: Limited by Exp. Joint. ** 13. Tubes: nil corr. allow. *** 16. MAWP: Limited by tubesheet. S/N "43890" is stamped on both tubesheet and channel flanges.
 The Code required pressures and temperatures marked on the heat exchanger relate to the basic design conditions. The heat exchanger design has been evaluated for specific operating conditions and shall be re-evaluated before it is operated at different operating conditions per UHX-19.2.2. Over pressure protection is the RESPONSIBILITY OF THE OWNER/USER per UG-125. No inspection opening required per UG-46(a). 22" O.D. Cooler Condenser. Item No.: E-610. (size = 22" od x 24" - 10 1/2" approx. overall)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements 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 2901 Expires 2008.12.30
 Date 2008.7.31 Name ELLETT INDUSTRIES LTD. Signed [Signature]
 (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/or the State or Province of BC and employed by British Columbia Safety Authority (BCSA) of British Columbia have inspected the pressure vessel described in this Manufacturer's Data Report on 2008.7.31, 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 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 2008.7.31 Signed [Signature] Commissions N.B. 13124 A,N / BC# 82
 (Authorized Inspector) [National Board (incl. endorsements), State, Province, and Number]

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements on this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. U Certificate of Authorization Number 2901 Expires 2008.12.30

Date 2008.7.31 Name ELLETT INDUSTRIES LTD. Signed [Signature]
 (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/or the State or Province of BC and employed by British Columbia Safety Authority (BCSA) of British Columbia, have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items SA-312-TP304/L Smls, 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 the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. The described vessel was inspected and subjected to a hydrostatic test of 215 psig. 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/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 2008.7.31 Signed [Signature] Commissions N.B. 13124 A,N / BC# 82
 (Authorized Inspector) [National Board (incl. endorsements), State, Province, and Number]