

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

A 595239

1. Manufactured and certified by ENERFLEX SYSTEMS LTD. PRODUCTION AND PROCESSING, 2103 - 8 STREET, NISKU, AB, CANADA, T9E 7Z1
(Name and address of manufacturer)

2. Manufactured for BG INTERNATIONAL PROJECT LTD, CANADA
(Name and address of purchaser)

3. Location of installation SUNDANCE GAS FACILITY LSD: d-A21-C/93-I-16
(Name and address)

4. Type HORIZONTAL PREHEATER B7563-20
(Horiz. vert., or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Mfg's, Serial No.)

U9168.21 B7562-00-DR-20-001-001 REV 2 2009
(CRN) (Drawing No.) (Nat'l Bd No.) (Year Built)

5. ASME Code, Section VIII, Div. 1 2007 2008 ---
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.): 30'-0"

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
3	42"	10'	SA516-70N		0.375"	0.125"	1	FULL	100%	1	FULL	100%	1150°F	1
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7. Heads: (a) Matl. SA516-70N (b) Matl. SA350LF2CL1
(Spec. No., Grade) (Spec. No., Grade)

	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)	END	0.4375"	0.125"	---	---	2:1	---	---	---	NO	YES	SMLS	NONE	---
(b)	END	3.81"	0.125"	---	---	---	---	49.5"	---	---	---	---	---	---

If removable, bolts used (Describe other fastenings) 36 OF 1 1/2" X 1' SA 193 B7M STUDS C/W (2) SA 194 2HM HEX NUTS EACH
(Matl., Spec., No., Gr., 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 190 --- psi at max. temp. 400 --- °F. Min. design metal temp. -40 °F at 190 psi
(internal) (external) (internal) (external)

10. Impact test YES, See Remarks at test temperature of --- °F.
(Indicate yes or no and the component(s) impact tested)

11. Hydro test press. 247 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)]

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[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) 8 (b) Overall length (ft & in.): 228'-6"

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
2	4"	30'2.75"	SA106C		0.674"	0.125"	SMLS	NONE	---	1	FULL	100%	1150°F	1
6	4"	168'	SA106C		0.674"	0.125"	SMLS	NONE	---	1	FULL	100%	1150°F	1
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15. Heads: (a) SA 350LF2CL1, CL 2500 RTJWN (1150 F FOR 1 HR) (b) SA350LF2CL1, CL 2500 RTJWN(1150 F FOR 1 HR)
(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)	END	---	0.125"	---	---	---	---	---	---	---	---	---	---	---
(b)	END	---	0.125"	---	---	---	---	---	---	---	---	---	---	---

If removable, bolts used (Describe other fastenings) ---
(Matl., Spec., No., Gr., Size, No.)

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16. MAWP 4500 190 psi at max. temp. 400 400 °F. Min. design metal temp. -20 °F at 4500 psi
(internal) (external) (internal) (external)

17. Impact test No, exempt per UG-20(f) at test temperature of --- °F.
(Indicate yes or no and the component(s) impact tested)

18. Hydro test press. 5850 Proof test ---

19. Nozzles, inspection, and safety valve openings

Purpose (Inlet, Inlet, Outlet, Drain)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
HM	2	4" CL 300	RFWN	SA333GR6	SA350LF2CL1	0.674"	0.125"	---	UW16.1(c)	TYPE 1	SHELL
DRAIN	1	2" CL 300	RFWN	SA333GR6	SA350LF2CL1	0.344"	0.125"	---	UW16.1(c)	TYPE 1	SHELL
PSV	1	4" CL 300	RFWN	SA333GR6	SA350LF2CL1	0.674"	0.125"	---	UW16.1(c)	TYPE 1	SHELL
PG/TG/PT	3	2" CL 300	RFWN	SA333GR6	SA350LF2CL1	0.344"	0.125"	---	UW16.1(c)	TYPE 1	SHELL
LSSL	1	4" CL 300	RFWN	SA333GR6	SA350LF2CL1	.674"	0.125"	---	UW16.1(c)	TYPE 1	SHELL
GAS IN/OUT	2	4"CL2500	RTJWN	SA 106C	SA350LF2CL1	.674"	0.125"	---	UW16.1(l)	TYPE 1	HEAD
BRK FLG	1	42"CL 150	RFWN	---	SA350LF2CL1	---	0.125"	---	---	TYPE 1	SHELL END

20. Support Skirt NO Lugs --- Legs 2 Others --- Attached SHELL 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: PREHEATER (E-100), Const Dwg.: B7562-00-DR-20-001-001 REV 4

Line 10) Yes, Production Impact per UG-84 @-40F, No, exempt per UG-20(f), UCS-66(a)(g), Fig UCS-66 note (c).

SHELL VOLUME: 305 cu.ft (8.65 cu.m.) COIL VOLUME: 12.84 cu.ft (0.363 cu.m.) , Heating Surface: 279.2 sq.ft (25.9sq.m). PSV by Others.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements on 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 16081 Expires JUN 29, 2010

Date Aug. 26, 2009 Name ENERFLEX SYSTEMS LTD. PRODUCTION AND PROCESSING 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 ALBERTA and employed by ABSA of ALBERTA

have inspected the pressure vessel described in this Manufacturer's Data Report on AUG 7 6 2009, 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 AUG 2 6 2009 Signed [Signature] Commissions AB95A
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

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 Code, Section VIII, Division 1.

U Certificate of Authorization No. 16081 Expires JUN 29, 2010

Date --- Name ENERFLEX SYSTEMS LTD. PRODUCTION AND PROCESSING 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/or the State or Province of ALBERTA 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 the 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) (Nat'l Board incl. endorsement, State, Province and No.)