



# CONSTRUCTION DATA REPORT FOR PIPING SYSTEMS

In accordance with the provisions of the Safety Codes Act

Shop Construction ; Field Construction ; Final Data Report   
 Partial Data Report  (from one ABSA-authorized Contractor to another ABSA-authorized Contractor).

### Complete both sides of this Form

1. Constructed By: **Enerflex Systems Ltd, EFX Compression** Owner's Job No: **051009 (051036)**  
(Name of ABSA authorized primary contractor or subcontractor)  
**4700 - 47th St. SE, Calgary AB, T2B 3R1**  
(Address)

Alberta Quality Program No. **AQP-1044** Expiry Date: **APRIL 15, 2008**

2. Constructed For: **N/A**  
(Name of primary contractor if different from above)  
**N/A**  
(Address)

Alberta Quality Program No. AQP- **N/A** Expiry Date: **N/A**  
(Required when the primary contractor undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

3. Owner: **ENERFLEX LEASING LD., 4700 - 47 STREET S.E. CALGARY, AB T2B 3R1**  
(Name and address)  
**RAINBOW LAKE, AB LSD #10-24-110-04 W6M**  
(Location of installation)

Alberta Quality Program No. AQP- **N/A** Expiry Date: **N/A**  
(Required when the owner undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

4. Piping Design Alberta Registration No.: **PP- N/A**  
(Required if aggregate piping volume is over 0.5m<sup>3</sup>)

5. WP No.: **WP-807.2**; Company: **Enerflex Systems Ltd.**; Owner's WP No. (If used): **WP- N/A**  
(Alberta Registration No.) (Alberta Registration No.)  
 WPS No(s). used: **ESL-101/103/121**; Owner's WPS No(s). (If used): **N/A**

6. Code: ASME B31.1 Non Boiler External Piping ; ASME B31.1 Boiler External Piping   
 ASME B31.3  - Service category: Normal , D , M , High Pressure ; B31.5 ; B31.9

Drawing No. Rev. No. Line No.	Fluid (Air/Stm. Etc.)	Des. Press. PSI	Des. Temp. °F	Test Press. PSI	Test Medium	Pipe Mat'l Spec. & Grade	C.A. mm	Pipe NPS & Schedule	Flange Material & Rating	PWHT/ Preheat Temp. °F	R.T. %	Other NDE
109222C	GAS	1415	150	2225	H <sub>2</sub> O	SA106B	1/16"	1-1/2"160	SA105N 600#	50	N/A	VIS
109604B	GAS	1292	350	2225	H <sub>2</sub> O	SA106B		3"XS	SA105N 600#	50	10	VIS
109632B	GAS	1292	350	2225	H <sub>2</sub> O	SA106B		2"XS	SA105N 600#	50	10	VIS
109656B	GAS	1415	150	2225	H <sub>2</sub> O	SA106B		2"XS	SA105N 600#	50	10	VIS
109688D	GAS	707	150	1125	H <sub>2</sub> O	SA106B		4"XS	SA105N 300#	50	10	VIS





# CONSTRUCTION DATA REPORT FOR PIPING SYSTEMS

In accordance with the provisions of the Safety Codes Act

Shop Construction ; Field Construction ; Final Data Report ;  
 Partial Data Report  (from one ABSA-authorized Contractor to another  
 ABSA- authorized Contractor).

## Complete both sides of this Form

1. Constructed By: **ENERFLEX SYSTEMS LTD., EFX COMPRESSION** Owner's Job No: **051009 (060077)**  
(Name of ABSA authorized primary contractor or subcontractor)  
**4700 - 47<sup>TH</sup> ST. S.E. CALGARY, AB T2B 3R1**  
(Address)

Alberta Quality Program No. **AQP-1044** Expiry Date: **APRIL 15, 2008**

2. Constructed For: **N/A**  
(Name of primary contractor if different from above)  
**N/A**  
(Address)

Alberta Quality Program No. AQP- **N/A** Expiry Date: **N/A**  
(Required when the primary contractor undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

3. Owner: **ENERFLEX LEASING LTD. 4700 - 47 STREET S.E. CALGARY, AB T2B 3R1**  
(Name and address)  
**RAINBOW LAKE, AB LD #10-24-110-04 W6M**  
(Location of installation)

Alberta Quality Program No. AQP- **N/A** Expiry Date: **N/A**  
(Required when the owner undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

4. Piping Design Alberta Registration No.: PP- **N/A**  
(Required if aggregate piping volume is over 0.5m<sup>3</sup>)

5. WP No.: **WP-807.2** ; Company: **ENERFLEX SYSTEMS LTD. EFX COMPRESSION** ; Owner's WP No. (If used): **WP-N/A**  
(Alberta Registration No.) (Alberta Registration No.)  
 WPS No(s). used: **ESL-101/103/121** ; Owner's WPS No(s). (If used): **N/A**

6. Code: ASME B31.1 Non Boiler External Piping ; ASME B31.1 Boiler External Piping ;  
 ASME B31.3  - Service category: Normal , D , M , High Pressure ; B31.5 ; B31.9 .

Drawing No. Rev. No. Line No.	Fluid (Air/Stm. Etc.)	Des. Press. PSI	Des. Temp. °F	Test Press. PSI	Test Medium	Pipe Mat'l Spec. & Grade	C.A.	Pipe NPS & Schedule	Flange Material & Rating	PWHT/ Preheat Temp. °F	R.T. %	Other NDE
1D1	GAS	1292	350	2225	H <sub>2</sub> O	SA106B	1/16"	3"XS	SA105N 600#	50	10	VIS
1S1	GAS	707	150	1125	H <sub>2</sub> O	SA106B		4"XS	SA105N 300#	50	10	VIS
1S3	GAS	707	150	1125	H <sub>2</sub> O	SA106B		3"XS	SA105N 600# 300#	50	10	VIS
2D1	GAS	1292	350	2225	H <sub>2</sub> O	SA106B		2"XS	SA105N 1500# 600#	50	10	VIS
2S2	GAS	707	150	1125	H <sub>2</sub> O	SA106B		2"XS	SA105N 1500# 300#	50	10	VIS





**A** 545359

1. Manufactured and certified by Air-X-Changers, A Harsco Company, 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA  
 (Name and address of manufacturer)  
 2. Manufactured for ENERFLEX, 4700 - 47TH STREET SE, CALGARY, Alberta, T2B 3R1, CANADA  
 (Name and address of purchaser)

3. Location of Installation UNKNOWN  
 (Name and address)

4. Type HEAT EXCHANGER  
 (Horiz. or Vert. tank) 055580.3 R8395.213 HDR-3, REV-0 50748 2005  
 (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2004 to N/A  
 (year) (Addenda (Date))  
N/A N/A  
 Code Case Nos. Special Service per UG-120(d)

6. Shell: SA516 70(N) 1.25" .0625" 7.625" ID 1' 9.25"  
 Mat'l. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams: CORNER JOINT N/A N/A N/A N/A N/A N/A N/A  
 Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F) Time (hr) Sngl., Lap, Butt) R.T. (Spot, Eff. (%) or Full) No. of Courses

8. Heads: (a) Mat'l: SA516 70(N) SA516 70(N)  
 (Spec. No., Gr. (Spec. No., Grade))

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Cr.	SA516 70(N)			
				Apex	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) TOP, BTM	1"	.0625"		N/A	4" X 21.25"	N/A	
(b) ENDS	.75"	.0625"		N/A	4" X 5.625"	N/A	

If removable, bolts used (describe other fastenings) COVER

9. MAWP 1292 N/A psi at max. temp. Min. design metal temp. -20 °F at 1292  
 (internal) (external) psi at max. temp. Hydro, pneu., or comb. test pressure Hydro. 1680 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
↓, OUT	2	3"	600# RFWN	SA105/SA106GRB	SCH 80	WELD	WELDED	HEADER
BYPASS	1	3"	600# RFWN	SA105/SA106GRB	SCH 80	WELD	WELDED	HEADER
DRAIN	1	1.5"	TOL	SA105	6000#	WELD	WELDED	HEADER

11. Supports: Skirt NO Lugs N/A Legs N/A Other STRUCTURE Attached BOLTED  
 (Yes or no) (No.) (No.) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors, have been furnished for the following items of the report:  
N/A PSV SET @ 707 PSI SLFM 1594  
 (Name of part, item number, Mfg's name and identifying stamp)

(A) TUBES: 26, 1" OD, STRAIGHT: YES, LENGTH: 96", GAUGE: 16BWG, MATERIAL SA214 ROLLED TUBE SHEET.  
 (B) INSP. OPENINGS: 52, TYPE: 1 1/8" x 12UNF-THREADED, MATERIAL: SA105 (C) IMPACT REQUIREMENTS:  
VESSEL EXEMPT FROM IMPACT TESTING PER UG 20 (f)

**CERTIFICATE OF SHOP/FIELD 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. 4241 expires 12/31/2005

Date 12/06/2005 Co. name Air-X-Changers, A Harsco Company Signed [Signature]  
 (Manufacturer) (Representative)

---

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by Air-X-Changers, A Harsco Company at 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA, I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province OK, KS, MO and employed by OneBeacon America Insurance Co. of Boston, MA have inspected the component described in this Manufacturer's Data Report on December 6, 2005 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 12/06/2005 Signed [Signature] Commissions 7376A, OK652, KS356, MO0132  
 (Nat'l Board (incl. endorsements), State, Prov. and No.)

A 545360

1. Manufactured and certified by Air-X-Changers, A Harsco Company, 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA  
(Name and address of manufacturer)  
2. Manufactured for ENERFLEX, 4700 - 47TH STREET SE, CALGARY, Alberta, T2B 3R1, CANADA  
(Name and address of purchaser)

3. Location of Installation UNKNOWN  
(Name and address)

4. Type HEAT EXCHANGER 055580.4 R7796.213 HDR-4, REV-0 50749 2005  
(Horiz. or Vert. tank) (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2004 to N/A  
(year) (Addenda (Date))  
Code Case Nos. N/A Special Service per UG-120(d) N/A

6. Shell: SA516 70(N) .875" .0625" 5.5" ID 2' 4.375"  
Mat'l. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams: CORNER JOINT N/A N/A N/A N/A N/A N/A N/A N/A  
Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp (°F) Time (hr) Girth. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot, Eff. (%) or Full) No. of Courses

8. Heads: (a) Mat'l: SA516 70(N) (b) Mat'l: SA516 70  
(Spec. No., Grade) (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	TOP, BTM	.75"	.0625"	N/A	N/A	N/A	N/A	N/A	4" X 28.375"	N/A
(b)	ENDS	.625"	.0625"	N/A	N/A	N/A	N/A	N/A	4" X 4"	N/A

If removable, bolts used (describe other fastenings) N/A

9. MAWP 1292 N/A psi at max. temp. 350 N/A °F (Mat'l., Spec. No., Gr., Size, No.)  
(internal) (external) (internal) (external)  
Min. design metal temp. -20 °F at 1292 psi Hydro, pneu., or comb. test pressure Hydro. 1680 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l.	How Attached	Location
IN, OUT	2	3"	600# RFWN	SA105/SA106GRB	SCH 80	WELD	WELDED	HEADER
BYPASS	1	3"	600# RFWN	SA105/SA106GRB	SCH 80	WELD	WELDED	HEADER
DRAIN	1	1.5"	TOL	SA105	6000#	WELD	WELDED	HEADER

11. Supports: Skirt NO Lugs N/A Legs N/A Other STRUCTURE Attached BOLTED  
(Yes or no) (No.) (No.) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors, have been furnished for the following items of the report:  
N/A PSV SET @ 1292 PSI SCFM 1571  
(Name of part, item number, Mfr's name and identifying stamp)

(A) TUBES: 53, .625" OD, STRAIGHT: YES, LENGTH: 96", GAUGE: 16BWG, MATERIAL SA214 ROLLED TUBE SHEET. (B) INSP. OPENINGS: 106, TYPE: 3/4" x 16UNF-THREADED, MATERIAL: SA105 (C) IMPACT REQUIREMENTS: VESSEL EXEMPT FROM IMPACT TESTING PER UG 20(f)

**CERTIFICATE OF SHOP/FIELD 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. 4241 expires 12/31/2005  
Date 12/06/2005 Co. name Air-X-Changers, A Harsco Company Signed [Signature]  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**  
Vessel constructed by Air-X-Changers, A Harsco Company at 5215 Arkansas Road, Catoosa, Oklahoma, 74015, USA I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province OK, KS, MO and employed by OneBeacon America Insurance Co. of Boston, MA have inspected the component described in this Manufacturer's Data Report on December 6, 2005 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 12/06/2005 Signed [Signature] Commissions 7376A, OK652, KS356, MO0132  
(Nat'l Board (incl. endorsements), State, Prov. and No.)