

66147834

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 ViEX Inc. 1201 Nicholson Road, Newmarket, Ontario, Canada, L3Y 9C3
 (Name and address of Manufacturer)
2. Manufactured for Toromont Energy Systems Ltd, 10121 Barlow Trail N.E. Calgary, Alberta, Canada, T3J 3C6
 (Name and address of purchaser)
3. Location of installation Unknown
 (Name and address)
4. Type Vertical VXN46 Plate & Frame Heat Exchanger 27116412-13
 (Horiz, vert, or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Mfg's serial No.)
- R5688.213 VX46-G-400 REV 0 N/A 2006
 (CRN) (Drawing No.) (Mat'l Bd. No.) (Year built)
5. ASME Code, Section VIII, Division 1 2004 Ed. 05 Add. None No
 (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 multichamber vessels

6. Shell: (a) No. of course(s): --- (b) Overall length (ft & in.): 3'-10.056"

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	Elf	Type	Full, Spot, None	Elf	Temp	Time
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SA516 Gr 70										SA516 Gr 70				
7. Heads: (a) (Mat'l Spec. No., Grade or Type) (H.T. - Time & Temp)										(b) (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	Ell
(a)	Fixed Head	3.5"	--	--	--	--	--	--	19.75X63.5	--	--	--	--	--
(b)	Mobile Head	2.5"	--	--	--	--	--	--	19.75X62.5	--	--	--	--	--

If removable, bolts used (describe other fastenings) 16 Tie Rods SA193 Gr B7 / Hex Nuts SA194 Gr 2H (1 1/4"-8UN)
 (Mat'l, Spec No., Grade, Size, No.)

8. Type of jacket n/a Jacket closure n/a
 (Describe as ogee & weld, bar, etc.)

If bar, give dimensions n/a If bolted, describe or sketch.

9. MAWP 400 none psi at max. temp. 250 n/a °F Min. design metal temp. -20 °F at 400 psi.
 (internal) (external) (internal) (external)

10. Impact test No (Impact Test Exemption Per UCS-66(a)) at test temperature of n/a °F.
 (Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. 520 psig Proof test n/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): --- (b) Overall length (ft & in.): ---

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	Elf	Type	Full, Spot, None	Elf	Temp	Time
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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

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

FORM U-1 (Back)

271164.12.13

16. MAWP 400 none psi at max. temp. 250 none °F. Min. design metal temp. -20 °F at 400 psi.
 (internal) (external) (internal) (external)

17. Impact test No (Impact Test Exemption Per UCS-66(a)) at test temperature of n/a °F.
 (Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. 520 psig Proof test n/a

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	
Hot Side Inlet	F4	3"-300#	stud port	--	--	--	--	--	--	integral	--
Hot Side Outlet	F1	3"-300#	stud port	--	--	--	--	--	--	integral	--
Cold Side Inlet	F2	3"-300#	stud port	--	--	--	--	--	--	integral	--
Cold Side Outlet	F3	3"-300#	stud port	--	--	--	--	--	--	integral	--

20. Supports: Skirt No Lugs No Legs No Others Feet Attached Bolted to fixed head/end post
 (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: (1) Each heat exchanger consists of 67 gasketed heat transfer plates which are clamped between fixed & mobile heads by tie rods.
 (2) Heat transfer plate material - SA240 304 (3) Heating surface is 321.8 sq.ft. (4) Inspection openings are not applicable (5) Safety relief devices per UG-125 are the responsibility of the user. (6) Volume per circuit is 12.13US gal.
 (7) Both circuits have same design conditions.

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. 32.742 Expires Aug 17, 2007

Date 27 June 2006 Name VIEX Inc. 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 Ontario and employed by TSSA of Ontario have inspected the pressure vessel described in this Manufacturer's Data Report on 27 JUNE 2006, 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 27 JUNE 2006 Signed [Signature] Commissions ONT 891
 (Authorized Inspector) (Nat'l Board (incl. endorsements) 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. 32.742 Expires Aug 17, 2007

Date 27 June 2006 Name VIEX Inc. 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 Ontario and employed by TSSA, 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 520 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 27 June 2006 Signed [Signature] Commissions ONT 891
 (Authorized Inspector) (Nat'l Board (incl. endorsements) State, Province and No.)