

FORM U-1A MANUFACTURERS DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

④ 482559

1. Manufactured and certified by Orban Industries Ltd. 5550-55st Street S.E. Calgary, Alberta T2C 3G9
(Name and Address of Manufacturer)
2. Manufactured for ENERMARK INC C/O TUXTLA 1900 700-9TH AVE SW CALGARY AB T2P-3V4
(Name and address of purchaser)
3. Location of installation: ENERMARK INC LSD 11-13-50-22 W4M
(Name and address)
4. Type VERTICAL 02-008 VS 1 P8345.2 02-008-A REV4 N/A 2002
(HORIZ or VERT, tank) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l Bld. 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 2001
Year

- to N/A N/A N/A
(Name and address of user)
6. Shell: SA-516-70N 500" 0625" 3'-11" 12'-0"
(Addenda (Date)) (Code case Nos) (Special Service per UG-120(d))
7. Seams: TYPE 1 FULL 100% N/A N/A TYPE 1 SPOT 1
(Mat'l (Spec. No., Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (overall) (ft. & in.))
(Long (Welded, Dbl. Singl. Lap, Butt)) (R.T. (Spot or Full)) (HT Temp. (°F)) (Time (hr)) (Girth (Welded, Dbl. Singl. Lap, Butt)) (R.T. (Spot, Partial or Full)) (No. of Courses)
8. Heads: (a) Mat'l. SA-516-70N (b) Mat'l. SA-516-70N
(Spec. No., Grade)

	Location (Top Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knock s Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	TOP	.4375"	.0625			2:1				CONCAVE
(b)	BOTTOM	.4375"	.0625			2:1				CONCAVE

If removable, bolts used (describe other fastenings)

9. MAWP 285 psi at max. temp. 100 °F
Min. design metal temp. -20 °F at 285 psi Hydro., pneu., or comb. test pressure 371 psi
(Mat'l, Spec. No., Gr., Size, No.)
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
				SEE ATTACHED	FORM	U-4		

11. Supports: Skirt YES 2 Legs Other Attached TOP/BOTT WELDED
(Yes or 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:

(Name of part, item number, Mfg's name and identifying stamp)

VOL 164.32 CU FT (4.65 CU M) VERTICAL SEPARATOR RADIOGRAPHY AS PER UW-11(a)(5)(b)
IMPACT TEST EXEMPT AS PER UG-20(f) UCS-66(b) SWEET SERVICE

MANUFACTURE DRAWING # 02-008-A REV 4 PSV PROVIDED ON PIPING AS PER UG 125

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. 32,685 expires JULY 11, 20 04

Date March 18/02 Co. name Orban Industries Ltd. Signed Burt Burt
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Orban Industries Ltd. at 5550-55 Street S.E. Calgary, Canada T2C 3G9

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 Alberta Boiler Safety Association

have inspected the component described in this Manufacturer's Data Report on March 20, 2002, 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 March 20/02 Signed [Signature] Commissions Alberta 4011
(Authorized Inspector) (Nat'l Board (incl endorsements), State/Prov and No.)

④ 482559.

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

1. Manufactured and certified by Orban Industries Ltd. 5550-55 Street S.E. Calgary, Alberta T2C 3G9
2. Manufactured for ENERGY-9K INC. C/O TUXTLA 1900 700-9TH AVE SW CALGARY AB T2P-3V4
(Name and address of Manufacturer)
3. Location of installation ENERMARK INC LSD 11-13-50-22 W4M
(Name and address of Purchaser)
4. Type: VERTICAL SEPARATE 02-008 VS 1
(Vertical, horizontal, or spherical) (Tank, separator, heat exch., etc.) (Fig's, serial no.)
- P8345.2 02-008-A REV 4 N/A 2002
(CRN) (Drawing No.) (Material Det. No.) (Year Built)

Data Report
Item Number 10
Continued from Form U1a

Remarks

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l	Nom. Thk.	Reinforcement Mat'l	How Attached	Location
INLET	1	10" 150#	RFWN	SA-1068 SA-105N	500"	SA-516-70N	UW16.1@	SHELL
OUTLET	1	10" 150#	RFWN	SA-1068 SA-105N	500"	SA-516-70N	UW16.1@	TOP HEAD
WATER OUT DRAIN	1	3" 150#	RFWN	SA-1068 SA-105N	437"	INHERANT	UW16.1@	BOTT HEAD
PSV	1	3" 150#	RFWN	SA-1068 SA-105N	437"	INHERANT	UW16.1@	SHELL
LC	1	3" 150#	RFLWN	SA-105N	0.62M	INHERANT	UW16.1@	SHELL
TI	1	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16.1@	SHELL
LG	2	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16.1@	SHELL
LG WATER	2	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16.1@	SHELL
LSH	1	1 1/2 6000#	T.O.L	SA-105N		INHERANT	UW 16.1@	SHELL
PI	1	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16.1@	SHELL
PSH	1	1/2 6000#	T.O.L	SA-105N		INHERANT	UW 16.1@	SHELL
MANWAY	1	20" 150#	RFWN	SA-1068 SA-105N	500"	SA-516-70N	UW 16.1@	SHELL

Certificate of Authorization: Type "J" No. 32658 Expires JULY 11 2004

Date March 18/62 Name Orban Industries Ltd Signed [Signature]
(Manufacturer)
Date March 20/62 Name [Signature] Commission Alberta 40/10
(Authorized Inspector) (Natl Board Ind. Endorsement, State, Province and No.)

This form (E00118) may be obtained from the ASME Order Dept., 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300 (12/91)

FORM U-1A MANUFACTURERS DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

CORRECTED DATA REPORT

④482559.

* corrected *

1. Manufactured and certified by Orban Industries Ltd 5550-55st Street S.E. Calgary, Alberta T2C 3G9
(Name and Address of Manufacturer)
2. Manufactured for ENERMARK INC C/O TUXTLA 1900 700-9TH AVE SW CALGARY AB T2P-3V4
(Name and address of purchaser)
3. Location of installation ENERMARK INC LSD 6-29-49-21- W4M
(Name and address)
4. Type VERTICAL 02-008 VS 1 P8345 2 02-008-A REV4 N/A 2002
(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 2001
Year

6. Shell: SA-516-70N 500" 0625" 3'-11" 12'-0"
(Addenda (Date)) (Code Case Figs.) (Special Service per UG 120(d))
7. Seams: TYPE 1 FULL 100% N/A N/A TYPE 1 SPOT 1
(Mat'l (Spec No. Grade)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (overall) (ft. & in.))
(Long (Welded, Dbl. Singl. Lap. Butt)) (RT (Spot or Full)) (E.R. (%)) (HT Temp. (°F)) (Time (hr)) (Grth (Welded, Dbl. Singl. Lap. Butt)) (RT (Spot Partial or Full)) (No. of Courses)

8. Heads: (a) Mat'l. SA-516-70N (b) Mat'l. SA-516-70N
(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	.4375"	.0625			2:1				CONCAVE
(b)	BOTTOM	.4375"	.0625			2:1				CONCAVE

If removable, bolts used (describe other fastenings)

9. MAWP 285 psi at max. temp. 100 °F
Min. design metal temp. -20 °F at 285 psi. Hydro., pneu., or comb. test pressure 371 psi.
(Mat'l Spec No. Gr Size No.)

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
				SEE ATTACHED	FORM	U-4		

11. Supports: Skirt Lugs Legs Other Attached
(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:

VOL 164 32 CU FT(4.65 CU M) VERTICAL SEPARATOR RADIOGRAPHY AS PER UW-11(a)5(b)
IMPACT TEST EXEMPT AS PER UG-20(f) UCS-66(b) SWEET SERVICE
MANUFACTURE DRAWING # 02-008-A REV 4 PSV PROVIDED ON PIPING AS PER UG 125

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 32,685 expires JULY 11, 20 04

Date April 8, 2002 Co. name Orban Industries Ltd. Signed
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Orban Industries Ltd. at 5550-55 Street S.E. Calgary, Canada T2C 3G9
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 Alberta Boiler Safety Association

have inspected the component described in this Manufacturer's Data Report on April 8, 2002, 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 April 8, 2002 Signed Commissions Alberta 40(12)
(Authorized Inspector) (Nat'l Board (incl. endorsements) Safe Prov. and No.)

① 482559

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

1. Manufactured and certified by Orban Industries Ltd. 5550-55 Street S.E. Calgary, Alberta T2C 3G9
(Name and address of Manufacturer)

2. Manufactured for ENERMARK INC C/O TUXTLA 1900 700-9TH AVE SW CALGARY AB T2P-3V4
(Name and address of Purchaser)

3. Location of installation ENERMARK INC LSD 6-29-49-21- W4M
(Name and address)

4. Type VERTICAL SEPARATOR 02-008 VS 1
(Horiz., vert., or sphere) (Tank, separator, heat exch., etc.) (Mfg's. serial No.)

P8345.2 02-008-A REV 4 N/A 2002
(CRN) (Drawing No.) (Nat'l Bd. No.) (Year Built)

Data Report
Item Number 10
Continued from Form U1a

Remarks

Purpose (Inlet, Outlet, Drain)	No	Diam. or Size	Type	Mat'l	Nom Thk	Reinforcement Mat'l	How Attached	Location
INLET	1	10" 150#	RFWN	SA-106B SA-105N	500	SA-516-70N	UW16 1@	SHELL
OUTLET	1	10" 150#	RFWN	SA-106B SA-105N	500	SA-516-70N	UW16 1@	TOP HEAD
WATER OUT DRAIN	1	3" 150#	RFWN	SA-106B SA-105N	437"	INHERANT	UW16 1@	BOTT HEAD
PSV	1	3" 150#	RFWN	SA-106B SA-105N	437"	INHERANT	UW16 1@	SHELL
LC	1	3" 150#	RFLWN	SA-105N	0.62wt	INHERANT	UW16 1@	SHELL
TI	1	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16 1(a)	SHELL
LG	2	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16 1(a)	SHELL
LG WATER	2	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16 1(a)	SHELL
LSH	1	1 1/2 6000#	T.O.L	SA-105N		INHERANT	UW 16.1(a)	SHELL
PI	1	1/2 6000#	T.O.L	SA-105N		INHERANT	UW16 1(a)	SHELL
PSH	1	1/2 6000#	T.O.L	SA-105N		INHERANT	UW 16 1(a)	SHELL
MANWAY	1	20" 150#	RFWN	SA-106B SA-105N	500	SA-516-70N	UW 16 1@	SHELL

Certificate of Authorization: Type "U" No 52658 Expires JULY 11 2004
02

Date Apr 18/02 Name Orban Industries Ltd. Signed [Signature]
(Manufacturer) (Representative)

Date April 8/2002 Name [Signature] Commission Alberta 4019
(Authorized Inspector) (Nat'l Board incl. Endorsement, State, Province and No.)