

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 J. V. Industrial Companies, Ltd. - Southeast Div. 2760 Sugar House Road. Port Allen, La. 70767
(Name and address of Manufacturer)
2. Manufactured for W M GTL, Inc.
(Name and address of Purchaser)
3. Location of installation 3201 Mosely Road Oklahoma City, Oklahoma 73141
(Name and address)
4. Type: Horizontal Air System / Syngas Preheater (E240A Exchanger) JVPA-8
(Horiz., vert., or sphere) (Tank, separator, jkt. Vessel, heat exh., etc.) (Mfg's serial No.)
N/A 03596HE1 Rev. 2 2 2009
(CRN) (Drawing No.) (Nat'l. Bd. No.) (Year Built)
5. ASME Code, Section VIII, Div. 1 2007 / A-08 N/A
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.): 4'-8 13/16"

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	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	8.625" OD	2'-6"	SA-312 316/316L	.322"	NONE	S E	FULL	100%	1	FULL	100%	**	**
1	8.625" OD	1'-6 13/16"	SA-312 316/316L	.322"	NONE	S E	FULL	100%	1	FULL	100%	**	**

7. Heads: (a) N/A (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp.
(b) N/A (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)	----	----	----	----	----	----	----	----	----	----	----	----	----	----
(b)	----	----	----	----	----	----	----	----	----	----	----	----	----	----

- If removable, bolts used (describe other fastening N/A)
(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 80 -15 (FV) psi at max. temp. 1000 1000 °F Min. design metal temp. -20 °F at 80 psi.
(internal) (external) (internal) (external)

10. Impact test No {UHA 51 (g) UNF-65} at test temperature of N/A °F.
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test press. 104 psig Proof test N/A

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: (2) SB-409 Alloy 800H 8 5/8" O.D. 1 3/4" None Welded
Stationary (Mat'l Spec. No.) Dia., in. (subject to press.) Nom. thk., in. Corr. Allow., in. Attachment (welded or bolted)
13. Tubes: N/A N/A N/A N/A N/A
Floating (Mat'l. Spec. No.) Dia., in. Nom. thk., in. Corr. Allow., in. Attachment
SB-407 Alloy 800H 3/4" 0.049" 34 Straight
(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): 4 (b) Overall length (ft & in.): 3' - 2"

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	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
2	8.625" OD	1' - 1 1/2"	SB-407 800H		0.500"	NONE	S E	FULL	100%	1	FULL	100%	1650°F	11/2 HR
2	8.625" OD	5 1/2"	SB-564 800H		0.500"	NONE	----	----	----	----	----	----	1650°F	11/2 HR

15. Heads: (a) SB-564 ALLOY 800H (b) SB-564 ALLOY 800H
(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	3 1/4"	N/A	----	----	----	----	----	1'-6 1/2" OD	----	----	----	NONE	100%
(b)	END	3 1/4"	N/A	----	----	----	----	----	1'-6 1/2" OD	----	----	----	NONE	100%

- If removable, bolts used (describe other fastening STUDS - 1 3/8" SB-408 Alloy 800H (24) NUTS/WASHERS - 1 3/8" ALLOY 800H (48))
(Mat'l Spec. No., Grade, size, No.)

FORM U-1 (Back)

16. MAWP 80 -15 (FV) psi at max. temp. 1500 1500 °F. Min. design metal temp. -20 °F at 80 psi.
(internal) (external) (internal) (external)

17. Impact test No {UHA 51 (g) UNF-65} at test temperature of N/A °F.
(Indicate yes or no and the component(s) impact tested)

18. Hydro., pneu., or comb. test press. 104 psig Proof test N/A

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	N	Diameter Or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	(Insp. Open.)
CHANNEL IN	1	3"	600# RFWN	SB-407	SB-564	0.438"	NONE	N/A	UW 16.1(e)	FIG. 2-4 (6)	CHANNEL
CHANNEL OUT	1	3"	600# RFWN	SB-407	SB-564	0.438"	NONE	N/A	UW 16.1(e)	FIG. 2-4 (6)	CHANNEL
SHELL IN	1	4"	300# RFWN	SA-312 316/316L	SA-182 316/316L	0.237"	NONE	N/A	UW 16.1(e)	FIG. 2-4 (6)	SHELL
SHELL OUT	1	4"	300# RFWN	SA-312 316/316L	SA-182 316/316L	0.237"	NONE	N/A	UW 16.1(e)	FIG. 2-4 (6)	SHELL
PSV-241	1	2"	600# RFWN	SB-407	SB-564	0.344"	NONE	N/A	UW 16.1(e)	FIG. 2-4 (6)	CHANNEL
PSV-242	1	2"	300# RFWN	SA-312 316/316L	SA-182 316/316L	0.218"	NONE	N/A	UW 16.1(e)	FIG. 2-4 (6)	SHELL

20. Supports: Skirt No Lugs N/A Legs N/A Others Saddles 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: ** Shell to Tubesheet weld 1650°F for 1 1/2 hrs per UNF-56 (e)(1).
*** 8" Single Unrestrained Expansion Joint, #2784-02, Lortz Manufacturing, U-30423 (refer to "U-2A" for other information)

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 for Authorization No. 36,745 Expires: July 3, 2010.

Date 11/3/2009 Name J. V. Industrial Companies, Ltd. - Southeast Div. 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 Louisiana and employed by HSB CT of Hartford, Conn. have inspected the pressure vessel described in this Manufacturer's Data Report on 11/2, 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 11/3/09 Name [Signature] Commissions NBB# 135004 LA 1560
(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 for Authorization No. _____ Expires: _____

Date _____ Name _____ Signed _____
(Assembler) (Authorized 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 _____ 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 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 _____ Name _____ Commissions _____
(Authorized Inspector) (Nat'l Board incl. Endorsement, State, Province and No.)

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FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM)
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by Lortz Manufacturing Company 4042 Patton Way Bakersfield, CA 93308

(Name and address of Manufacturer)

Manufactured for Oakridge Bellows 190 South Seguin Street

(Name and address of Purchaser)

3. Location of Installation Unknown

(Name and address)

4. Type: 8" Nominal Diameter Single Unrestrained Expansion Joint

2784-02

NA

(Description of vessel part (shell, two-piece head, tube bundle))

(Manufacturer's serial number)

(CRN)

NA

2784-02

Lortz Manufacturing

2009

(National Board number)

(Drawing number)

(Drawing prepared by)

(Year built)

2007 Ed, 2008 Ad,

NA

NA

App. 26

(Code Case number)

(Special Service per UG-120(d))

5. ASME Code Section VIII Div 1

(Edition and Addenda (date))

6. Shell (a) No. of course (s): 3

(b) Overall Length: 8"

Course(s)			Material	Thickness		Long. Joint (Cat. A)				Circum. Joint (Cat. A, B, & C)				Heat Treatment	
No.	Diameter	Length	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time		
1	8" ID	3.0625"	SA312-316/316L	.322	Zero	NA	None		A	PT	100	NA			
2	8.625" ID	3.125"	SA240-316/316L	.036"	Zero	A	Full	100	NA	None		NA			
3	8" ID	3.0625"	SA312-316/316L	.322	Zero	NA	None		A	PT	100	Na			

7. Heads: (a)

NA

(b)

NA

(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.	Down	Knuckle					Convex	Concave	Type	Full	Spot	None
(a)	NA														
(b)	NA														

If removable, bolts used (describe other fastenings)

NA

8. MAWP 80 NA at max temp. 1000 F NA

(Internal)

(External)

(Internal)

(External)

(Material spec. number, grade, size, number)

Min. design metal temp. 80 at -20 F

9. Impact Test

NA

at test temperature of NA

Indicate yes or no and the component(s) impact tested

Hydro., pneu., or comb. test press. 136 PSI Hydro Proof Test

NA

11. 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	
NA											
NA											

12. Identification of parts

Name of Part	Quantity	Line No.	Mfr's Identification No.	Mfr's Drawing no.	CRN	National Board No.	Year Built
8" Expansion Joint	1	NA	2784-02	2784-02	NA	NA	2009

13. Supports: Skirt

No

(Yes or No)

Lugs

NA

(Number)

Legs

NA

(Number)

Others

NA

(Describe)

Attached

NA

(Where and how)

14. Remarks

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction and workmanship of this pressure vessel part conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1.

U Certificate of Authorization No. 30423 Expires June 19, 2010

Date 8-3-2009

Name Lortz Manufacturing Company

Signed

[Signature]

(Manufacturer)

(Representative)

CERTIFICATE OF SHOP/FIELD 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 CALIFORNIA and employed by STATE of CALIFORNIA D.O.S.A.

have inspected the pressure vessel part described in this Manufacturer's Data Report on 08-03-09

and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel part 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 08-03-2009 Signed

[Signature]
(Authorized Inspector)

Commissions NB 10224 A.B. CAL1671

(National Board (incl endorsements) State, Province and number)