

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 Central Fabricators, Inc. 408 Poplar Street Cincinnati, Ohio 45214
(Name and address of Manufacturer)

2. Manufactured for Thermal Linetics Systems, LLC 667 Tift Street Buffalo, NY 14220
(Name and address of Purchaser)

3. Location of installation Central Illinois Energy 23133 East County Highway 6 Canton, Illinois 61520
(Name and address)

4. Type: Vertical Pressure/Vacuum Vessel N-105
(Horiz. vert., or spherical) (Tank, separator, etc. vessel, heat exch., etc.) (Mfr.'s serial No.)

5. ASME Code, Section VIII, Div. 1 2004 Edition 2005 Addenda 2226 2007
(Edition and Addenda (date)) (Code Case No.) (Year built)

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): 3 (b) Overall length (ft & in.): 2' 0" weld line to weld line

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	144"OD	5' 0"	SA240304L	.375"	0"	1	None	70%	1	None	70%	----	----
1	144"OD	4' 0"	SA240304L	.375"	0"	1	None	70%	1	None	70%	----	----
1	144"OD	3' 0"	SA240304L	.375"	0"	1	None	70%	1	None	70%	----	----

7. Heads: (a) SA240 304L (b) SA240 304L
(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)	Top	.438"	0"	----	----	2:1	----	----	----	Yes	Yes	1	None	85%
(b)	Bottom	.438"	0"	----	----	2:1	----	----	----	Yes	Yes	1	None	85%

If removable, bolts used (describe other fastening) Not Removable.
(Mat'l Spec. No., Grade, 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 25 15 psi at max. temp. 200 200 °F Min. design metal temp. - 20 °F at 25 psi.
(internal) (external) (internal) (external)

10. Impact test No. EXEMPT per UHA-51(d), UHA-51(e), UHA-51(f), UCS-66(a), UCS-66(c). at test temperature of N/A °F.
(Indicate yes or no and the component(s) impact tested)

11. Hydro. XXXXXXXXXX test press. 43 PSIG Proof test None.

Items 12 and 13 to be completed for tube sections.

12. Tubesheet:

<u>-----</u> <small>(Stationary (Mat'l Spec. No.))</small>	<u>-----</u> <small>(Dia., in. (subject to press.))</small>	<u>-----</u> <small>(Nom. thk., in.)</small>	<u>-----</u> <small>(Corr. Allow., in.)</small>	<u>-----</u> <small>(Attachment (welded or bolted))</small>
<u>-----</u> <small>(Floating (Mat'l Spec. No.))</small>	<u>-----</u> <small>(Dia., in.)</small>	<u>-----</u> <small>(Nom. thk., in.)</small>	<u>-----</u> <small>(Corr. Allow., in.)</small>	<u>-----</u> <small>(Attachment)</small>

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	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time

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	Eff.
(a)														
(b)														

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

16. MAWP 25 15 psi at max temp. 250 250 (internal) (external) F. Min. design metal temp. -20 F at 25/FV psi.
 17. Impact test NO PER UHA-51 (d) AND UCS-66(a) at test temperature of _____ F.
 18. Hydro. PERM EX EDDMX test press. 33 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 (Inso. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet	1	36"	LAPJT	SA-240-304/304L	SA-105	250	0	NONE	UW16.1	LAPJT	DOME
Drain	1	4"	LAPJT	SA-312-304/304L	SA-105	.237	0	NONE	UW16.1	LAPJT	DOME
Vent	1	6"	LAPJT	SA-312-304L	SA-105	.280	0	NONE	UW16.1	LAPJT	DOME
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

20. Supports: Skirt - Lugs 4 Legs - Others - Attached WELDED TO DOME
 (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, mfr.'s name and identifying number)
N/A

22. Remarks: All Shell diameters are Outside Dimensions.
VESSEL HYDRO TESTED IN THE HORIZ. POSITION
SAFETY RELIEF DEVICE BY OTHER
PO# 73338

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements 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. 1219 Expires 1/31/2008

Date 11/29/06 Name J.D. Cousins, Inc. Signed Mary Bailey
 (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 NY and employed by OneBeacon AMERICA INSURANCE CO. of Boston, MASS. have inspected the pressure vessel described in this Manufacturer's Data Report on 11/29/06, 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 11/29/06 Signed J. A. Thomas Commissions NB7710A N42705
 (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. _____ Expires _____

Date _____ Name J.D. Cousins, Inc. 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 _____ and employed by _____ 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. endorsements, State, Province and No.)