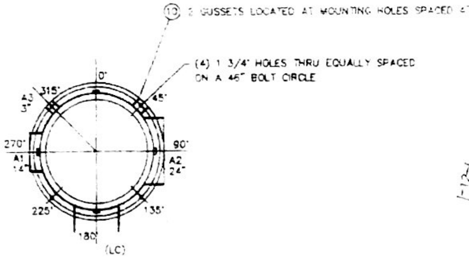
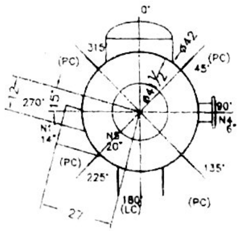
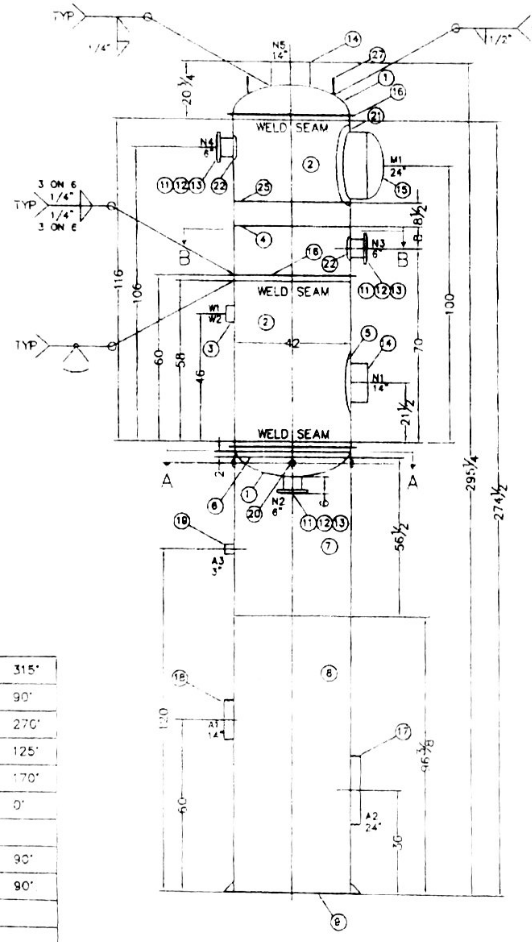
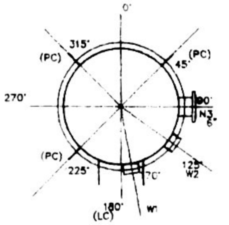


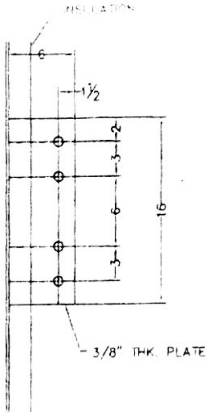
SECTION A–A







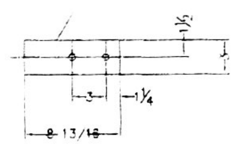
SECTION B–B



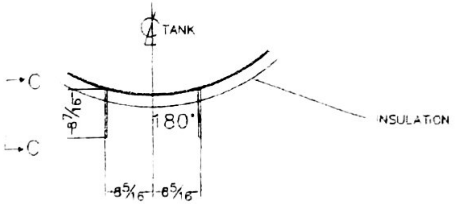
PLATFORM SUPPORT CLIP

7 PCS REQ'D ㉔

PC–7	?"	?'
PC–6	?"	?'
PC–5	?"	?'
PC–4	?"	?'
PC–3	?"	?'
PC–2	?"	?'
PC–1	?"	?'
CLIP #	ELEVATION	ANGLE



SECTION C–C

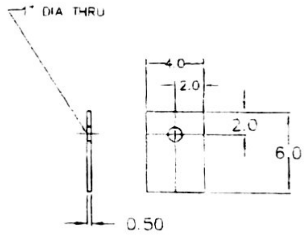


LADDER SUPPORT CLIP

4 SETS REQ'D ㉓

LC–4	?"	?'
LC–3	?"	?'
LC–2	?"	?'
LC–1	?"	?'
CLIP #	ELEVATION	ANGLE

CODE: ASME VIII DIV. 1 STAMPED AND REGISTERED
SPECIFIC GRAVITY/CONTENTS: 1.08
DESIGN PRESS.: 75/FV (psig)
DESIGN TEMP.: 250 (F)
OPERATING PRESS.: 12.26 (psig)
OPERATING TEMP.: 203 (F)
MDMT: –20 DEG. F
CORROSION ALLOWANCE: NONE
HYDRAULIC TEST PRESSURE: 97.5 PSI



㉗ LIFT LUG

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NOTES.

1) ALL BOLT HOLES TO STRADDLE NATURAL CENTERLINES UNLESS NOTED OTHERWISE.

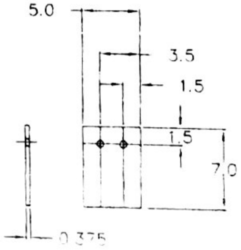
2) ALL STAINLESS STEEL TO BE L GRADE AND CERTIFIED.

3) FOR ALL INTERIOR AND EXTERIOR SURFACES SEE THERMAL KINETICS CLEANING AND BLASTING SPEC. GF–1.8.0 CLASS 1

4) ALL TOLERANCES PER ASME PRESSURE VESSEL CODE LASTEST EDITION, SECTION VIII, DIVISION 1

5) WIND 80 MPH, EXP. C W/F = 1.0

6) ALL FILLET WELDS 3/16" UNLESS NOTED



㉖ FIRE PROTECTION CLIP

FP–8	244–1/2"	315°
FP–7	244–1/2"	225°
FP–6	244–1/2"	135°
FP–5	244–1/2"	45°
FP–4	272–1/2"	315°
FP–3	272–1/2"	225°
FP–2	272–1/2"	135°
FP–1	272–1/2"	45°
CLIP #	ELEVATION	ANGLE

A3	FIRE PROTECTION	3"	ATMO	PLAIN		315°
A2	SKIRT ACCESS	24"	ATMO	PLAIN		90°
A1	SKIRT PENETRATION FOR N2	14"	ATMO	PLAIN		270°
W2	SIGHTGLASS 4" VIEW	NA		WP		125°
W1	SIGHTGLASS 4" VIEW	NA		WP		170°
M1	MANWAY W/HINGE	24"				0°
N5	VAPOR INLET	14"		BW	TO TW-4104	
N4	UPPER CIP	6"	150#	LJ	FR TP–4105	90°
N3	LOWER CIP	6"	150#	LJ	FR TP–4105	90°
N2	LIQUID RETURN	6"	150#	LJ	TO PC–4104	
N1	VAPOR INLET	14"		BW	FR ET–4104	
NOZZ.	SERVICE	SIZE	RATING	TYPE	REMARKS	DEGREE

AS BUILT DRAWING

(PC) PLATFORM CLIP
(LC) LADDER CLIP
(FP) FIRE PROTECTION CLIP

UNLESS OTHERWISE NOTED, ALL MACHINE SURFACES TO HAVE 125 RMS FINISH

UNLESS OTHERWISE NOTED, TOLERANCES ARE:
ANGLES ± 1/2°
FRACTIONS ± 1/16"
DECIMAL .X ± .03

REV	BY	DATE	DESCRIPTION

REMARKS	DATE
DRAWN BY: MG	11-4-08
CHECKED BY:	

BOTA WELDING

Customer THERMAL KINETICS

Title TP–4104
FABRICATION

Drawing Scale: | Plot Scale:

Customer Dwg Number 6018–MQ–4106

SHELL	TUBES	[illegible]
150PSI	X	X
250	X	X
15PSI	X	X
	-20	75
	X	X
	X	X

TP-4104 2007

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

1. Manufactured and certified by: Bota Welding, LLC 402 - 56th Street, Niagara Falls, NY 14304 (Name and address of manufacturer)

2. Manufactured for: Thermal Kinetics Systems, LLC 667 Tifft Street Buffalo, NT 14220 (Name and address of purchaser)

3. Location of installation: Unknown (Name and address)

4. Type: Vertical (Horiz. or vert. tank) TP-4104 (Mfg's serial No.) - (CRN) 6018-MQ-4106 Rev 3 (Drawing No.) 108 (Nat'l Bd. No.) 2007 (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, Div. 1 2004 (Year) to 2005 (Addenda (Date)) - (Code Case Nos.) - (Special Service per UG 120 (d))

6. Shell SA-240 TP-304L (Matl (Spec. No. Grade)) .25 (Nom. Thk (in.)) 0 (Corr. Allow. (in.)) 3' 5-1/2" (Diam. I.D. (ft & in.)) 9' 7-7/8" (Length (overall) (ft & in.))

7. Seams: Type 1 (Long. (Welded, Dbl, Sngl, Lap, Butt)) None (R.T. (Spot or Full)) 70 (Eff. (%)) N/A (H.T. Temp. (°F)) - (Time (hr)) Type 1 (Girth (Welded, Dbl, Sngl, Lap, Butt)) None (R.T. (Spot, Eff. (%) or Full)) 2 (No. of Courses)

8. Heads: (a) Matl SA-240 TP-304L (Spec. No., Grade) (b) Matl SA-240 TP-304L (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	.1875	0			2:1				Concave
(b)	BOTTOM	.1875	0			2:1				Concave

If removable, bolts used (describe other fastenings) (Matl Spec. No., Grade, Size, No.)

9. MAWP 75 (internal) 15 (external) psi at max temp. 250 (internal) 250 (external) °F

Min. design metal temp. -20 °F at 75 psi. Hydro, pneu., or comb. test press. 97.5 psi

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl	Nom. Thk	Reinforcement Material	How Attached	Location
Level	2	4"	stud-pad	SA-240 TP-304L	1.437	N/A	UW16.1©	shell
CIP & Return	3	6"	Cl150Flg	SA-312 TP-304L	.2800	SA240typ304L	UW16.1©	shell-head
Inlet	1	14"	W.E	SA-312 TP-304L	.3750	SA240typ304L	UW16.1©	shell
Manway	1	24.687"	------	SA-240 TP-304L	.2500	SA240typ304L	UW16.1©	shell
Inlet	1	14"	W.E	Sa-312 TP-304L	.3750	N/A	UW16.1©	head

11. Supports: Skirt YES (Yes or No) Lugs (No.) Legs (No.) Others (Describe) Attached Welded (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: Manway (Model 8324LC-10), Betts Industries ser # 9566-053 (Name of part, item number, Mfg's name and identifying stamp)

Impact Test Exempt Per UHA-51(d)&(g) UCS 66(c), Owner/User responsible for Pressure Relief Valve

(1)1/4"SA240 stiffener rings welded to shell(2) welded to heads.Cir seam 70% E. 2 Lifting Lugs welded to head for lifting empty ONLY.

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. [illegible]2,004 Expires 7-26 2009

Date 2/14/07 Co. Name Bota Welding, LLC (Manufacturer) Signed (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Bota Welding, LLC at 402 - 56th Street, Niagara Falls, NY 14304

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 New York and employed by HSB CT have inspected the component described in this Manufacturer's Data Report on 2/14/07, 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 2/14/07 Signed (Authorized Inspector) Commissions NB11103ANY5078 (Nat'l Board and endorsements) State, Prov. and No.