



MANUFACTURE BOARD with APACHE STAINLESS EQUIPMENT BEAVER DAM WI

Thermal Kinetics Systems, LLC logo and contact information.

- NOTES: 1. FLANGE BOLT HOLES ARE TO STRADDLE HOLE... 2. REMOVE ALL BURRS AND SHARP EDGES...

MATERIAL table with columns for SHELL, INTERIOR FINISH, and EXTERIOR FINISH.

ITEM QTY FUNCTION MATERIAL table listing parts like SHELL, TOP HEAD, and various flanges.

ITEM QTY FUNCTION MATERIAL table listing parts like INSULATION, GASKET, and various pipes.

08018
CIE: ETHANOL
Canton, Illinois
11.30.07
17.1 ET 4104
0180002 094

FILESPEC: THERMAL KINETICS SYSTEMS \11031\101 3 ET-4104VET-4104 REBOILER & PROOF CONDENSER.DWG

REVISIONS table with columns for REV, DESCRIPTION, BY, DATE, and REV.

APACHE STAINLESS EQUIPMENT CORP. 200 WEST INDUSTRIAL DRIVE... BEAVER DAM, WISCONSIN 53916

CUSTOMER, EQUIPMENT, MATERIAL, and DRAWING NUMBER information.

CIE FIELD FILE

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 APACHE STAINLESS EQUIPMENT CORPORATION,
200 WEST INDUSTRIAL DRIVE BEAVER DAM, WISCONSIN 53916
(Name and address of Manufacturer)

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

3. Location of installation Not Known
(Name and address)

4. Type: Vertical Evaporator Tank 11031-3 - D-004-881-03 1524 2007
(Horiz., vert., or sphere) (Tank, separator, jkt. vessel, heat exh., etc.) (Mfg's serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year built)

5. ASME Code, Section VIII, Div. 1 Edition 2004, Addenda - 2005 -
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): 4 (b) Overall length (ft & in.): 40'-0"

No.	Course(s)		Material		Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment				
	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full	Spot	None	Eff.	Type	Full	Spot	None	Eff.	Temp.	Time
1	43 5/8" I.D.	5'-1/2"	SA240 304L	.187"	-	1	None		70	1	None	70	-	-	-	-	-
1	43 5/8" I.D.	12'-0"	SA240 304L	.187"	-	1	None		70	1	None	70	-	-	-	-	-
1	43 5/8" I.D.	13'-0"	SA240 304L	.187"	-	1	None		70	1	None	70	-	-	-	-	-

7. 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.)

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

MAWP 75 -15 psi at max. temp. 250 250 °F Min. design metal temp. -20 °F at 75/-15 psi.
(internal) (external) (internal) (external)

10. Impact test No, Exempt By UHA 51(d) at test temperature of _____ °F
(Indicate yes or no and the component(s) impact tested)

11. Hydro. ~~test~~ test press. 101 Proof test _____

Items 12 and 13 to be completed for tube sections.

12. Tubesheet: SA240 304L 41 1/2" 1" - Welded
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: SA249 304L 1 1/2" 18GA .049" 380 Straight
Mat'l Spec. No., Grade or Type O.D., in. Nom. thk., in. or gauge Number Type (Straight or U)

Items 14 - 16 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell (a) No. of course(s): 3 (b) Overall length (ft & in.): 10'-1"

No.	Course(s)		Material		Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment				
	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full	Spot	None	Eff.	Type	Full	Spot	None	Eff.	Temp.	Time
1	43 5/8" I.D.	8'-0"	SA240 304L	.187"	-	1	None		70	1	None	70	-	-	-	-	-
1	43 5/8" I.D.	1'-7"	SA240 304L	.187"	-	1	None		70	1	None	70	-	-	-	-	-
1	43 5/8" I.D.	0'-6"	SA240 304L	.187"	-	1	None		70	1	None	70	-	-	-	-	-

15. 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
(a)	Top	.165"	-	43 5/8"	3"	-	-	-	-	X	X	-	None	85
(b)	Bottom	.165"	-	43 5/8"	3"	-	-	-	-	X	X	-	None	85

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

NB 1524

APACHE STAINLESS EQUIP CORP



75 PSIG

25 PSIG

N/A

250

220

N/A

15 PSIG

15 PSIG

N/A

W

20

75

20

25

N/A

N/A

1103M-3

2007

ET-4184