

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS  
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

114247  
B 402  
or B 408

1. Manufactured and certified by KAM THERMAL EQUIPMENT LTD. 98-21 -97th AVENUE 11416  
(Name and address of manufacturer)

2. Manufactured for AMERICAN HOECHST CORP. COVENTRY, R.I.  
(Name and address of purchaser)

3. Location of installation \_\_\_\_\_  
(Name and address)

4. Type HORIZONTAL 6611 B-6464-ST 743  
(Horiz. or vert., tank) (Mfg.'s serial No.) (CRN) (Drawing) (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 1983  
Year

Addenda (date) \_\_\_\_\_ Code Case No. \_\_\_\_\_ Special service per UG-120 (d) \_\_\_\_\_  
Items 6-11 incl. to be completed for single wall vessels, jackets of jackets of jacketed vessels, or sheets of heat exchangers.

6. Shell: SA-312 T-316 .165 0 10 8' 2 1/2"  
Matl. (Spec. No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (Overall) (ft & in.))

7. Seams: WELDED DB 70% 1  
Long. (Dbl., Sngl.) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F)  
Time Girth (Dbl., Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

8. Heads: (a) Matl. \_\_\_\_\_ (Spec. No., Grade) (b) Matl. \_\_\_\_\_ (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)										
(b)										

If removable, bolts used (describe other fastenings) \_\_\_\_\_  
(Matl. Spec. No., Gr. Size, No.)

9. Type of Jacket \_\_\_\_\_ Proof Test \_\_\_\_\_

10. Jacket Closure \_\_\_\_\_ If bar, give dimensions \_\_\_\_\_ If bolted, describe or sketch.  
(Describe as ogee & weld, bar, etc.)

11. MAWP 90 psi at max. temp. 390 °F. Min. temp. (when less than -20° \_\_\_\_\_ °F.  
Hydro., pneu., or comb. test press. 135 psi.

Items 12 and 13 to be completed for tube sections

12. Tubesheets: SA-240 T-316 10" 3/4" 0 WELDED  
Stationary Matl. (Spec. No., Gr.) (Diam. (in.) (Subject to pressure)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) Attach. (Welded, Bolted)

SA-249 T-316 3/4 18 56 STRAIGHT  
Floating Matl. (Spec. No., Gr.) (Diam. (in.)) (Nom. Thk. (in.)) (Corr. Allow. (in.)) Attach. (Welded, Bolted)  
Matl. (Spec. No., Gr.) (OD (in.)) (Nom. Thk. (in. or Gauge)) (Number) Type (Straight or 'U')

Items 14-17 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers

14. Shell: \_\_\_\_\_  
Matl. (Spec. No., Grade) (Nom. Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (Overall) (ft & in.))

15. Seams: \_\_\_\_\_  
Long. (Dbl., Sngl.) R.T. (Spot or Full) Eff. (%) H.T. Temp. (°F)  
Time Girth (Dbl., Sngl.) R.T. (Spot, Partial, or Full) No. of Courses

16. Heads: (a) Matl. SA-312 & SA-240 T-316 (b) Matl. SA-240 T-316  
(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)	END	.165	0							CONCAVE
(b)	END	.165	0							CONCAVE

If removable, bolts used (describe other fastenings) T-304 SA-193 -B-8; 5/8"; 8  
(Matl., Spec. No., Gr., Size, No.)

17. MAWP 90 psi at max. temp. 390 °F. Min. temp. (when less than -20° \_\_\_\_\_ °F.  
Hydro., pneu., or comb. test press. 135 psi.

Form U-1 (Back)

18. Nozzles, Inspection and Safety Valve Openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Meth.	How Attached	Location
INLET	1	1½	S.O.F.	SA-182			WELDED	BONNET
OUTLET	1	1½	S.O.F.	"			"	"
DRAIN	1	3/4	CPLG.	"			"	BONNET
INLET	1	6	S.O.F.	"			"	SHELL
OUTLET	1	3	"	"			"	"
DRAIN	1	3	S.O.F.	"			"	"
VENT	1	3/4	CPLG.	SA-182			WELDED	SHELL

19. Supports: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other SADDLES Attached SHELL & WELDED  
(Yes or no) (No) (No) (Describe) (Where and how)

20. 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)

UNIT TO BE USED AS A HEAT EXCHANGER  
\_\_\_\_\_  
\_\_\_\_\_

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. 892 expires Aug. 19, 19198  
Date 7/16/86 Co. name KAM THERMAL EQUIP. LTD. Signed [Signature]  
(Manufacturer) (Representative)

Vessel constructed by KAM THERMAL EQUIP. LTD. at OZONE PARK, NEW YORK

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 COMMERCIAL UNION CO.

of NEW YORK have inspected the pressure vessel described in this Manufacturer's Data Report on 7/16/86, 19\_\_\_\_\_, 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 the 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 7/16/86 Signed [Signature] NEW YORK STATE COMMISSION # 2350  
(Authorized Inspector) (By Representative)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly construction of all parts of this vessel conforms with the requirements of Section VIII, Division 1 of the ASME Boiler and Pressure Vessel Code.

"U" Certificate of Authorization No. \_\_\_\_\_ expires \_\_\_\_\_, 19\_\_\_\_\_  
Date \_\_\_\_\_ Co. name \_\_\_\_\_ Signed \_\_\_\_\_  
(Assembler that certified and constructed field assembly) (By 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 that, 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

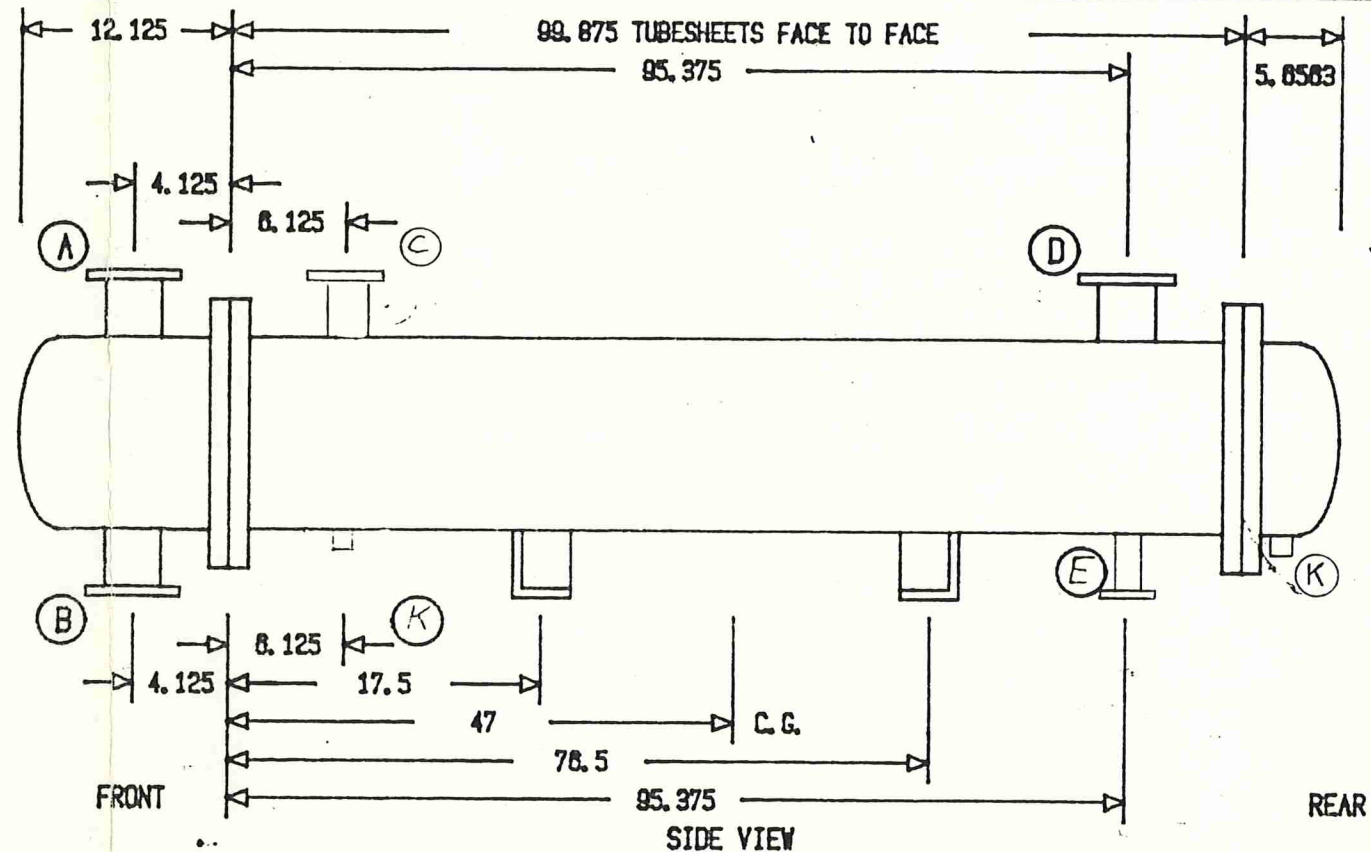
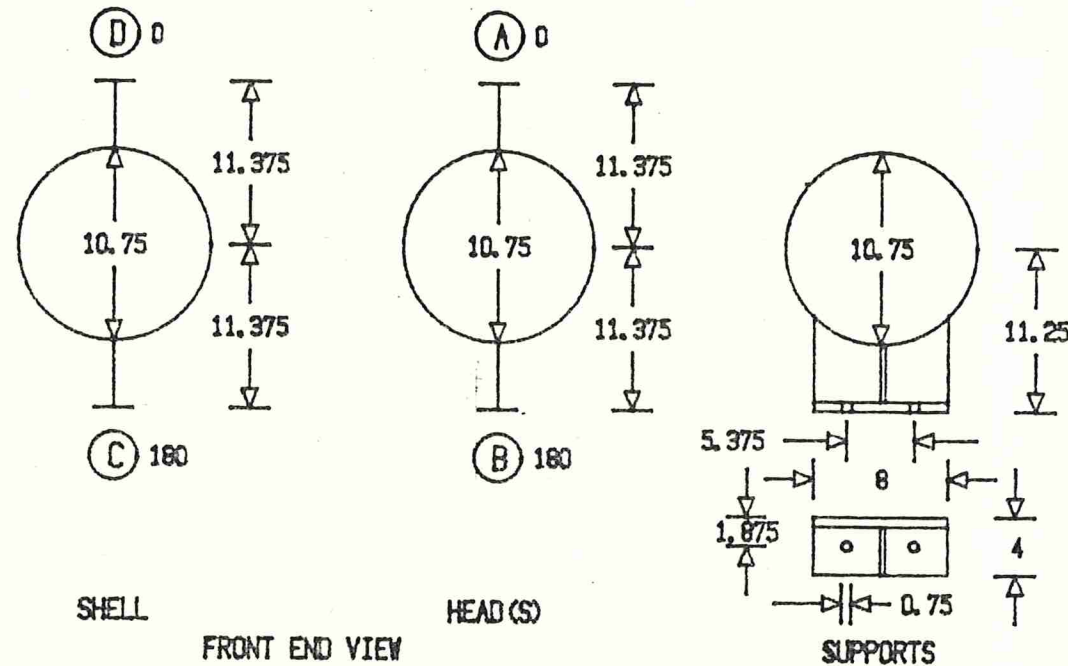
vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date \_\_\_\_\_ Signed \_\_\_\_\_ Commissions \_\_\_\_\_  
(Authorized Inspector) (Nat'l Board (incl. endorsements), State, Prov., and No.)



114247

ALL SIZE DIMENSIONS  
IN INCHES



Control By:  
KAM THERMAL EQUIPMENT, LTD.  
9/3/86

COMPONENT	O. D.	TKS.	MATERIALS OF CONSTRUCTION		DESIGN SPECIFICATIONS		
NOZZLE A	1.9	0.065	150 # ANSI S.O.	FLG SA-240 WITH SA-312 TP316 WLD HI ALLOY PIPE	DESIGN PRESSURE	psig	SHELL SIDE 90
NOZZLE B	1.9	0.065	150 # ANSI S.O.	FLG SA-240 WITH SA-312 TP316 WLD HI ALLOY PIPE	TEST PRESSURE	psig	TUBE SIDE 90
NOZZLE C	6.625	0.109	150 # ANSI S.O.	FLG SA-240 WITH SA-312 TP316 WLD HI ALLOY PIPE	DESIGN TEMPERATURE	F	CODE 390
NOZZLE D	3.5	0.083	150 # ANSI S.O.	FLG SA-240 WITH SA-312 TP316 WLD HI ALLOY PIPE	NUMBER OF PASSES		1
COUPLING K	0.75		3000 # HALF LENGTH SA-182 F316 HI ALLOY STEEL COUPL		CORROSION ALLOWANCE	in	0.0
NOZZLE E	2.375	.065	150 # ANSI S.O. FLG SA-240 W/SA-312 TP316 HI ALLOY PIPE		RADIOGRAPHING		NONE
SHELL CYLINDER	10.75	0.165	SA-312 TP316 WLD HI ALLOY PIPE		TEMA TYPE BEM	SIZE 10-100	AREA 92 ft <sup>2</sup>
FRONT HEAD CYLINDER	10.75	0.1875	SA-182 GR F11 ALLOY STEEL FORG		TUBE TYPE BARE	# HOLES 56	LENGTH 100 in
HEAD COVERS	10.75	0.1875	SA-182 F316 HI ALLOY STEEL FORG ELLIPSOIDAL COVER		LAYOUT 0.9375 in TRI	TUBE-TS JOINT EXPANDED	
TUBESHEETS	14.5	0.625	SA-240 GR 316 HI ALLOY STEEL PLT		BAFFLE TYPE SINGLE SEGMENTAL	CUT 50 % H	NO 3
HEAD FLANGES AT TBSHTS	14.5	0.875	SA-240 GR 316 HI ALLOY STEEL PLT RING FLANGE		BAFFLE SPACING (C-C)	50.0	AT INLET in
HEAD GASKETS AT TBSHTS	11.875	0.125	GYLON 3504 1/8" TK PERIPH. WIDTH 0.375 in		IMPINGEMENT PROTECTION	NONE	
HEAD BOLTING AT TBSHTS	0.625		SA-193 B8 CL.1 (304) HI ALLOY STEEL BLT 8 BOLTS ON 13.0 in B.C.		CODE ASME SEC. VIII DIV.1	TEMA CLASS	
TUBES	0.75	0.049	SA-249 TP316 WLD HI ALLOY TUBE BARE TUBES		WEIGHT EMPTY 625	FULL 954	BUNDLE 309 lb
BAFFLES	10.375	0.125	SA-240 GR 316 HI ALLOY STEEL PLT		DRAWN BY	CKD BY	APVD BY
SHELL SUPPORTS		0.375	SA-240 GR 316 HI ALLOY STEEL PLT		KAM THERMAL EQUIPMENT, LTD.		
					OZONE PARK, NEW YORK		
					AMERICAN HOECHST CORP		
					COVENTRY RI		
					P.O.-508191		
					DATE-4-17-86		
					DWG-B6464ST		
			ITEM-B402	408			