

KOCH PROCESS SYSTEMS

PROJECT 550

K.P.S. DWG. NO. 501-8-048

REVIEW BY/DATE

☐ PROJ. ENG.

☐ MECHANICAL

☐ STRESS

☐ ELECTRICAL

☐ PROCESS

☐ MFG. ENG.

☐ MANUF.

☐ Q. A.

☐ DRAFTING

4/19/91

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THIS REVIEW DOES NOT RELIEVE THE SELLER OR CONTRACTOR OF ANY OBLIGATIONS UNDER THE P.O. OR CONTRACT.

☐ FINAL APPROVAL

☐ APP'D AS NOTED - REVISE & RESUBMIT

☐ APPROVED FOR FABRICATION

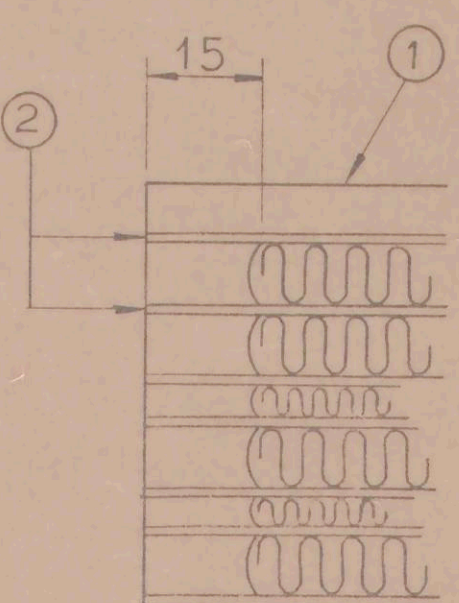
☐ NOT APPROVED - REVISE & RESUBMIT

☐ RELEASED FOR PROCUREMENT OF MATERIALS ONLY

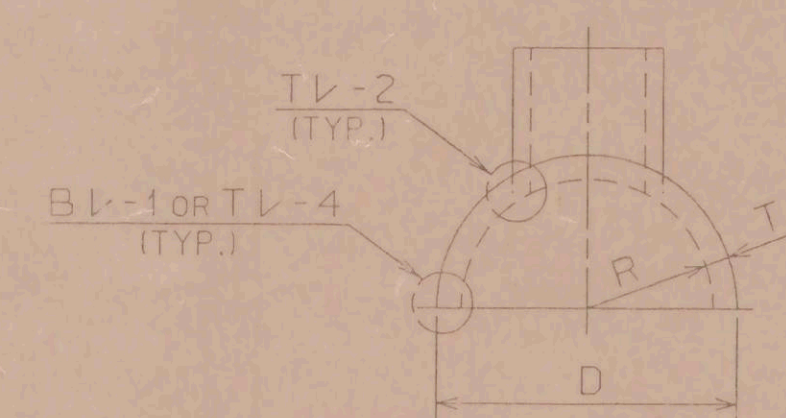
DATE 4/19/91

3	4	A1+A2	3	5
2	C	6		
1	A1+A2	7		
3	0	B	8	
9	A1+A2	9		
8	C	4	0	
7	C	1		
6	A1+A2	2		
5	B	3		
4	A1+A2	4		
3	C	5		
2	C	6		
1	A1+A2	7		
2	0	C	8	
9	C	9		
8	A1+A2	5	0	
7	B	1		
6	A1+A2	2		
5	C	3		
4	C	4		
3	A1+A2	5		
2	B	6		
1	A1+A2	7		
1	0	C	8	
9	C	9		
8	A1+A2	6	0	
7	C	1		
6	C	2		
5	A1+A2	3		
4	B	4		
3	A1+A2	5		
2	C	6		
1	DUMMY	6	7	

STACKING  
ARRANGEMENT

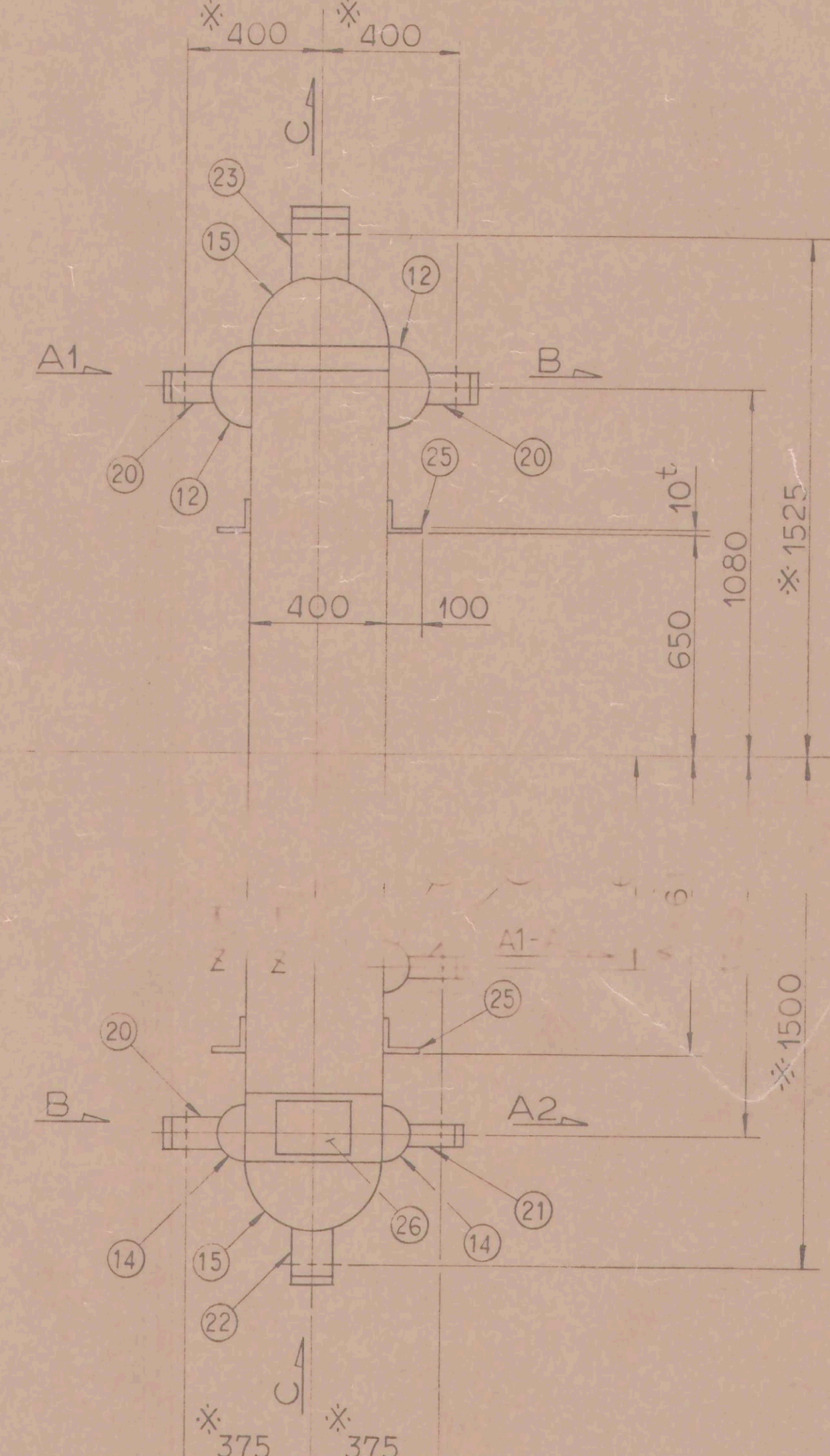


SEC. Z-Z



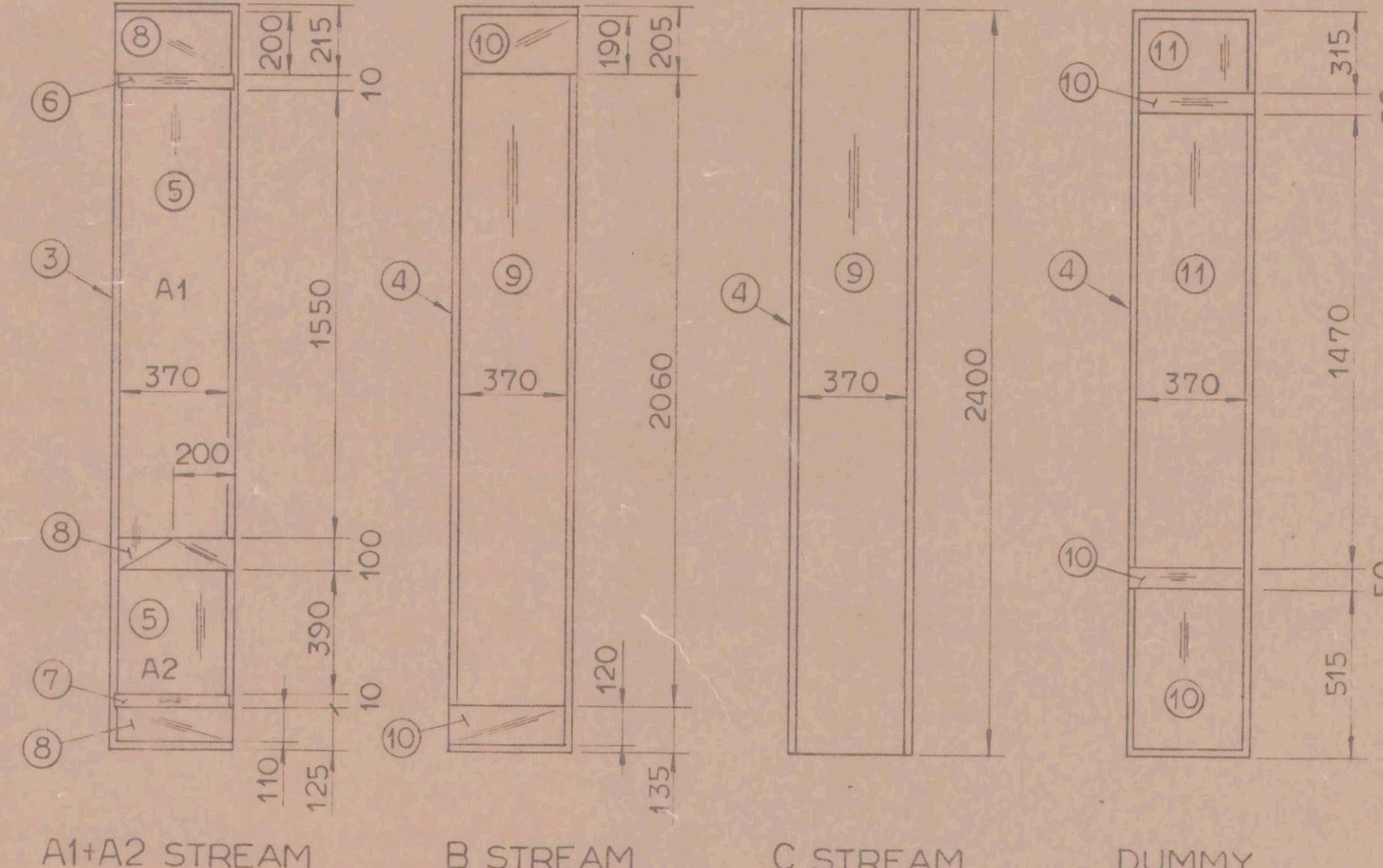
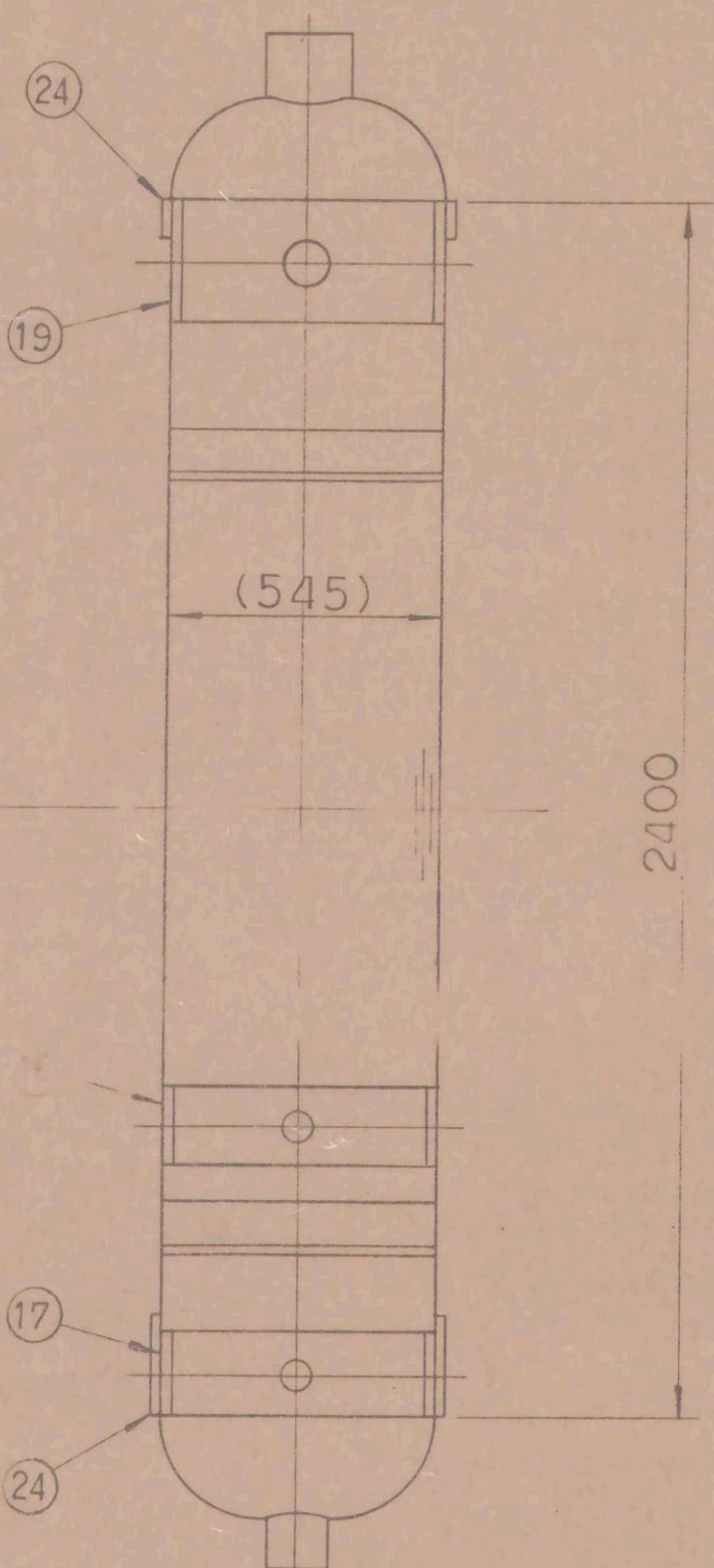
DETAIL OF HEADER TANK

ITEM NO.	R	T	D
(12)	108	6	228
(13)	58	5	126
(14)	68	5	146
(15)	190	8	396



TOP

BOTTOM



A1+A2 STREAM B STREAM C STREAM DUMMY

ESTIMATED SIC DATA UNIT : PSI/G.KG/M <sup>2</sup> /G		OP. PRESS UNIT :		CORROSION PROOF TEST		IN CODE		NO. OF	
STREAM	FLUID	TEMP.	DESIGN TEMP.	LEAKAGE	WATER	ATM. A	MAIN	DISTRIBUTOR	LAYERS
A1	HP HE	300		330	450	17,694	* 150S1808	150R1412/5	25
A2	HP HE	(21.1)	-452/150 (4/332)	(23.3)	(31.7)		(V16)	(V15)	
B	MP HE	150		165	225	3,148	350S1510	350R0624/5(V6)	10
C	LP HE	(10.6)		(11.7)	(15.9)	1,118	(V108)		30

\*: HARDWAY FIN  
STREAM A1 : 150R1824/25 (V119) \* LENGTH 10mm WARM END  
STREAM A2 : 150R1824/10 (V121) \* LENGTH 10mm COLD END

- NOTES
1. ASSEMBLY: MATERIALS OF METAL PARTS ARE ALUMINUM AND ALUMINUM ALLOY AND BONDED BY VAC. BRAZING AND ARGON ARC WELDING.
  2. APPROX. WEIGHT : 550 KG (EMPTY)
  3. \* SHDWS THE LOCATION AT WHICH HEAT EXCHANGER AND CONNECTION PIPES SHALL BE CONNECTED AT SITE, (INDICATED BY SCRIBE MARKS)
  4. PROOF TEST OF CORRUGATION WAS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF PARA.UG-101 OF ASME CODE SEC.VIII DIV.1
  5. ONE(1) NAME PLATE IS ATTACHED TO CORE. (ITEM NO. (26))
  6. OTHER TESTS : HELIUM LEAK TEST, (EXTERNAL AND ALL INTERPASSAGES LEAK TEST)

ALLOWABLE LEAK RATE: EXTERNAL =  $1 \times 10^{-6}$  mbar - l/s  
INTER PASSAGE =  $1 \times 10^{-4}$  mbar - l/s

@7. THERE IS NO ITEM REQUIRED RADIOGRAPHIC INSPECTION.

SPECIFICATIONS	
CODE FOR CONSTRUCTION AND INSPECTION	ASME SEC. VIII DIV.1 1989 EDITION AND 1989 ADDENDA
DETAIL SPEC. FOR INSPECTION	SHS-E-1250
SEALING METHOD FOR SHIPPING	SHS-P-152
STORAGE AND INSTALLATION INSTRUCTION	SHS-P-140
REPAIR METHOD OF DEFECTS	SHS-L-0043
STANDARD OF EDGE PREPARATION	SHS-S-1004
THERMAL PERFORMANCE DATA	STD SH0666 SSR 2830
PACKING SPECIFICATION	SHS-P-1083-G

(27)	NAME PLATE	SUS304	1t
(26)			1t
(25)	BRACKET	SB-221 6063	L=100x100x10t
(24)	PLATE	SB-209 5083	6t
(23)	PIPE	SB-241 5083	168.3φ x 7.1t
(22)			114.3φ x 6.0t
(21)			60.5φ x 3.9t
(20)			89.1φ x 5.5t
(19)	END PLATE	SB-209 5083	12t
(18)			8t
(17)			12t
(16)			10t
(15)	HEADER TANK	SB-209 5083	190R x 8t
(14)			68R x 5t
(13)			58R x 5t
(12)			108R x 6t
(11)	CORRUGATION	SB-209 3003	0.61t(350P0624)
(10)			0.61t(350R0624/5)
(9)			0.25t(350S1510)
(8)			0.31t(150R1412/5)
(7)			0.61t(150R1824/10)
(6)			0.61t(150R1824/25)
(5)	SPACER BAR	SB-209 3003 SB-221 3003	0.20t(150S1808)
(4)			8.89H x 15W
(3)			3.81H x 15W
(2)	TUBE PLATE	SFA-5.8/BA151-7/5083	1.05t
(1)	SIDE PLATE	SB-209 3003	6.5t
ITEM NO.	PART NAME	MATERIAL	DESCRIPTION
APPROVED		CUSTOMER	
FEB 27 '91		KOCH PROCESS SYSTEMS, INC.	
CHECKED		TITLE	
FEB 27 '91 J. Okada		MTL/ASST CRYOGENIC SYSTEMS (ISSCL)	
		JOB NO. C502066	
		HX-1002/1003	
		REFRIGERATOR/LIQUEFIER	
		APR 18 1991	
		SUMITOMO PRECISION PRODUCTS CO., LTD.	
		1-10, FUSO-CHO AMAGASAKI, JAPAN	
DRAWN		UNIT	SCALE
Feb. 25, '91 K. YOSHIMURA		MM	1/15
		3RD ANGLE PROJ.	
		ASHO666-1	
		(A)	