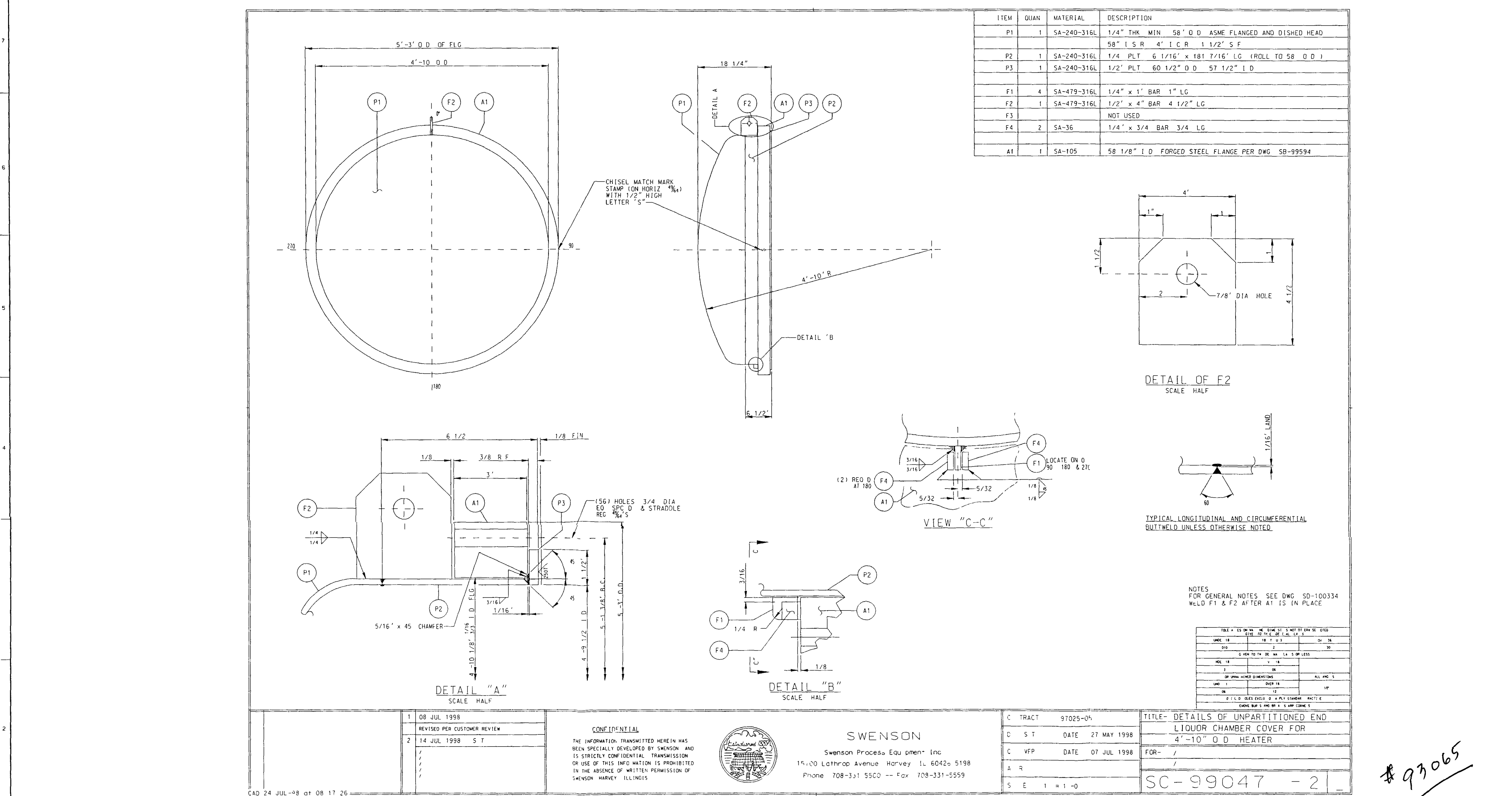
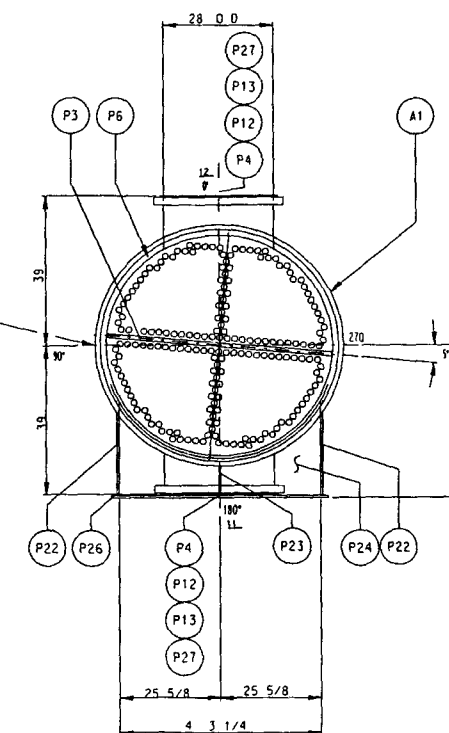
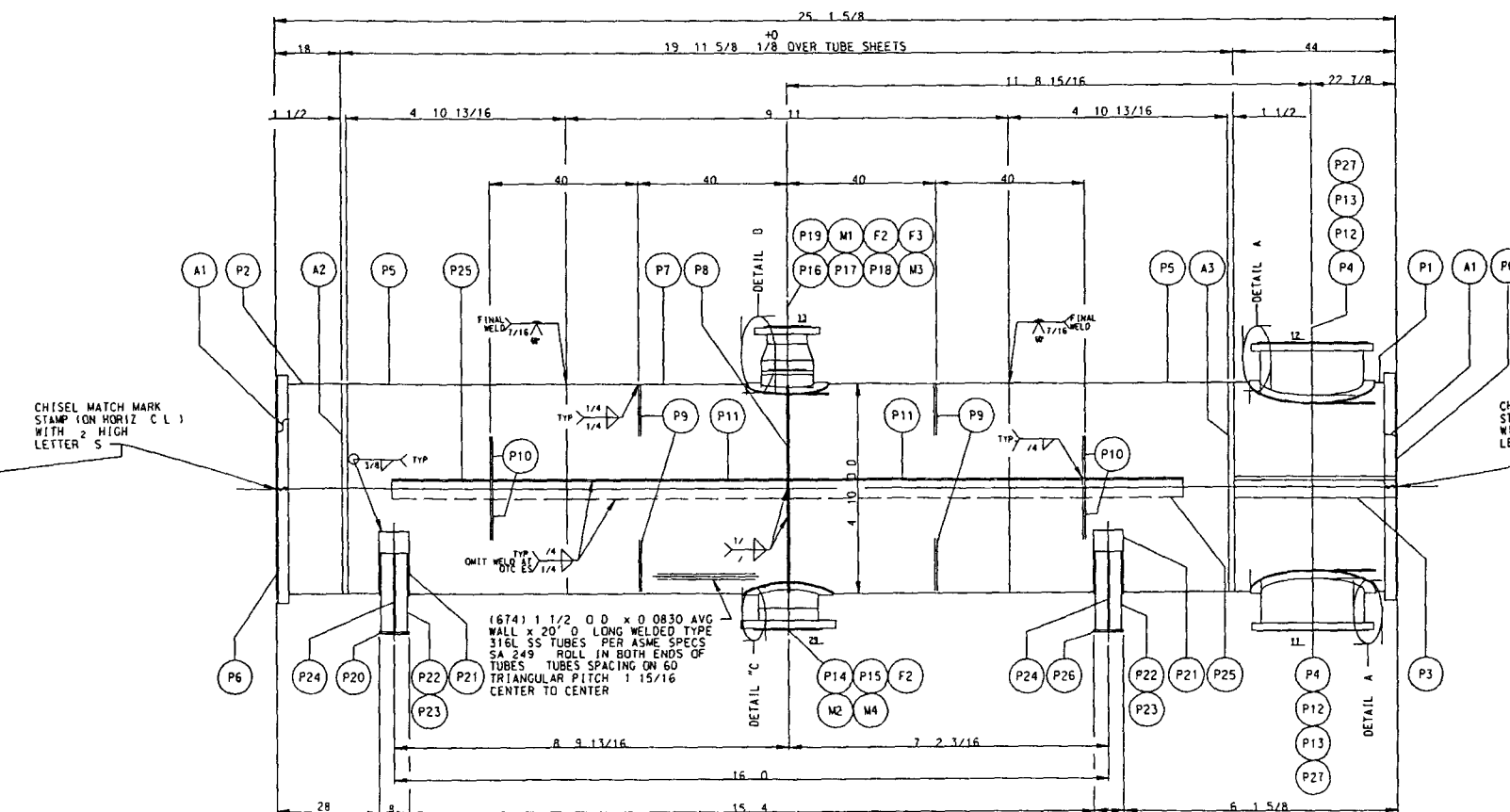
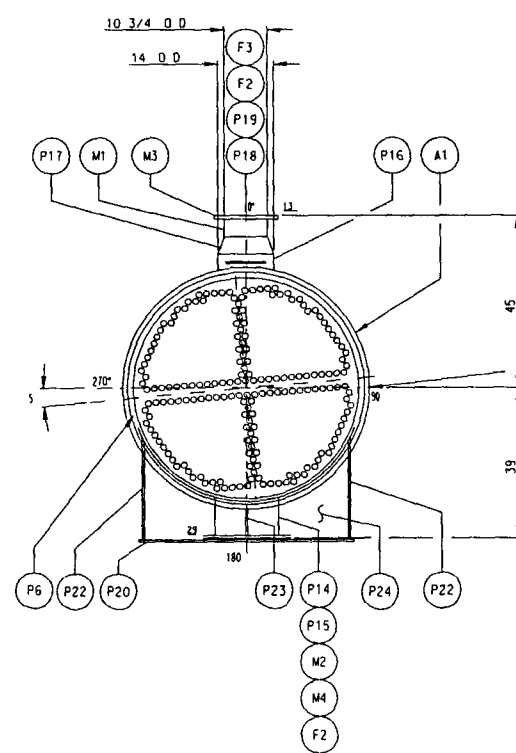




EVAPORATOR HEATER FABRICATION DETAILS										I30 EQ 368		BM NO	W.O. NO	Hoechst Celanese		TITLE	
												ACCT NO	EST NO	ENGINEERING PLASTICS DIVISION		EVAPORATOR HEATER	
												DRAWN BY		BISHOP, TEXAS		HE-3063 UNPARTITIONED	
												CHECKED BY		ENGINEERING DEPARTMENT		HEAD DETAILS	
												PROJECT ENGINEER		THIS DRAWING IS THE PROPERTY OF AND CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION BELONGING TO HOECHST CELANESE CORPORATION. IT MUST BE RETURNED IMMEDIATELY AFTER COMPLETION OF USE OR UPON REQUEST AND MUST NOT BE COPIED OR WHOLE OR IN PART, NOR THE INFORMATION SHOWN THEREON DISCLOSED TO THIRD PARTIES OR OTHERWISE USED EXCEPT WITH SPECIFIC WRITTEN PERMISSION OF HOECHST CELANESE CORPORATION.			
												GROUP LEADER					
												PLANT ENGINEER		Hoechst		AREA	
														I30		UNIT	
														SFRU		SCALE	
														EQUIPMENT		NTS	
																DRAWING NUMBER	
																I30-EQ-361	
																CAED NO	
																0130 0 070	



PARTITIONED END VIEW

GENERAL NOTES

FABRICATION AND MATERIAL TO CONFORM TO ASME CODE FOR PRESSURE VESSELS SECTION VIII DIVISION 1 1995 EDITION 1996 ADDENDA ALL WELDS AND WELD PROFILES MUST BE QUALIFIED IN ACCORDANCE WITH SECTION VIII & SECTION IX OF THE ASME CODE FOR BOTH MATERIAL AND POSITION

ALL WELDING TO BE DONE IN ACCORDANCE WITH ASME CODE PROCEDURES

WELDING ELECTRODE FOR RESPECTIVE METAL

SPOT X RAY IS REQUIRED IN ACCORDANCE WITH UW 52 & APPENDIX 4 NATIONAL BOARD STAMP AND REGISTRATION IS REQUIRED

SHELL SIDE ONLY

MAXIMUM ALLOWABLE WORKING PRESSURE

INTERNAL 154 PSI AT 400 F (LIMITED BY CONN 1881)

EXTERNAL 15 PSIG AT 300 F

TEST TO 281 PSIG COLD WATER PRESSURE AT 60 F

TUBE SIDE ONLY

MAXIMUM ALLOWABLE WORKING PRESSURE

INTERNAL 92 PSIG AT 300 F (LIMITED BY BODY FLANGES)

EXTERNAL 15 PSIG AT 200 F

TEST TO 79 PSIG COLD WATER PRESSURE AT 60 F

CORNERS OF INTERNAL NOZZLE PROJECTIONS TO BE ROUNDED OR CHAMFERED PER UW 16

ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE NOTED

FACES OF PLATE TO BE FLAT AND SQUARE WITH CENTERLINE

BOLT HOLES IN FLANGES TO BE EQUALLY SPACED

AND STRADDLE REGULAR CENTERLINE

FOR VESSEL FABRICATION TOLERANCES SEE Dwg S 59575

APPROX EMPTY WEIGHT OF VESSEL 455 984 LBS

FOR DETAILS OF 16 Q D CONDUITE P 9 SEE Dwg S 900375

FOR DEVELOPMENT OF P16 SEE Dwg SB 959536

FOR DEVELOPMENT OF P14 SEE Dwg SB 959597

FOR DEVELOPMENT OF P17 SEE Dwg SB 959676

FOR DEVELOPMENT OF P18 SEE Dwg SB 959677

FOR DEVELOPMENT OF P16 SEE Dwg SB 959675

FOR DEVELOPMENT OF P15 SEE Dwg SB 959598

FOR DEVELOPMENT OF P4 SEE Dwg SB 959595

FOR DETAIL OF A1 SEE Dwg SB 959594

FOR DETAILS OF PARTITIONED LIQUOR CHAMBER COVER SEE Dwg S 99047

FOR DETAILS OF UNPARTITIONED LIQUOR CHAMBER COVER SEE Dwg S 99047

FOR ADDITIONAL DETAILS OF 4 TO 0 Q D TWO PASS HORIZONTAL HEATING ELEMENT SEE Dwg S 900375

FOR GENERAL ARRANGEMENTS SEE Dwg S 98983 & S 900195

TYPICAL LONGITUDINAL AND CIRCUMFERENTIAL
BUT WELD UNLESS OTHERWISE NOTED

TYPICAL LONGITUDINAL AND CIRCUMFERENTIAL
BUTTWELD UNLESS OTHERWISE NOTED

1	02 JUL 1998
	REVISED PER CUSTOMER REVIEW & PER CODE
	14 JUL 1998 S F
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	/
	/

CONFIDENTIAL

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EN SPECIALLY DEVE "PED BY SWENSON AND
S STRICTLY CO FIDENTIAL TRANS MISSION
USE OF S I FOR ATIO IS PROHIBIT
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NSO ARVEY ILLINOIS

SWENSON

Senson Process Equipment Inc.
15700 Lathrop Avenue Harvey, IL 60446-5198
Phone 708 331 5500 Fax 708 331 5559

CONTRACT 97025 05	TITLE DETAILS OF 4'-10" O D TWO-PASS HORIZONTAL HEATING ELEMENT (HE-3063)
DR S T DATE 02 MAY 1998	SAP EO NO 10039568
CH VFP DATE 01 JUL 1998	FOR /
APPR	/
SCALE 1/2" 1'-0"	SD -100334 -2

[illegible]

EVAP HEATER SADDLE NOZZLE & MISC DETLS

EVAP HEATER CONDENSATE POT DETAILS

EVAP HEATER CONDENSATE POT DETAILS

130	EQ 369	NO NO	NO NO	5/22/9
130	EQ 370	ALL NO	ES NO	
		PLAN BY		DATE
		CHECKED BY MAX		DATE
		PROJECT ENGINEER ACP		DATE
		GROUP LEADER		DATE
		PLANT ENGINEER		DATE

Hoechst Celanese
ENGINEERING PLASTICS DIVISION
BISHOP TEXAS
ENGINEERING DEPARTMENT

THIS DRAWING IS THE PROPERTY OF A D CONTAINS CONFIDENTIAL A D PROPRIETARY INFORMATION BELONGING TO THE ENGINEERING PLASTICS DIVISION OF HOECHST CELANESE CORPORATION IT MUST BE RETURNED IMMEDIATELY AFTER COMPLETION OF USE OR UPON REQUEST A D MUST NOT BE COPIED IN WHOLE OR IN PART NOR THE INFORMATION SHOWN THEREON DISCLOSED TO THIRD PARTIES OR OTHERWISE USED EXCEPT WITH SPECIFIC WRITTEN PERMISSION OF HOECHST CELANESE CORPORATION

Hoechst

TITLE	EVAPORATOR HEATER HE-3063 FABRICATION DETAILS
IN	

AREA 130	UNIT SFRU	SCALE	DRAWING NUMBER
TYPE OF DRAWING EQUIPMENT		NTS	130-EQ-368

CAED NO 0130 Q 077

SEE PLAN VIEW FOR TRUE ORIENTATION OF ALL NOZZLES SUPPORTS ETC

APPROXIMATE WEIGHTS OF EQUIPMENT								
EQUIPMENT	EMPTY	C G EMPTY	FULL OF H ₂ O	C G FULL	OPERATING	C G OPER	MAL-OP	C G MAX-OP
I-EFFECT CRYSTALLIZER	20 963	26 885	131 264	28 303	126 048	24 227	186 587	28 067
I-EFFECT HEATING ELEMENT	36 515	10 830	73 733	10 850	60 528	10 820	74 252	10 839

NOTES C G CENTER OF GRAVITY IN FEET FROM GRADE ELEVATION 10 0 1
WEIGHTS ARE IN POUNDS (LBS)

GRADE ELEVATION 58 6

SECTION A-A
REF DWG 130-EQ 358

REVISED WEIGHT TABLE FOR CRYSTALLIZER		REVISED WEIGHT TABLE FOR HEATER	
7	19 AUG 1998 S T	4	29 MAY 1998 S T
8	17 SEP 1998 S T	5	30 JUL 1998 S T
		6	29 JUN 1998 S T

REVISED WEIGHT TABLE FOR CRYSTALLIZER		REVISED WEIGHT TABLE FOR HEATER	
1	21 JAN 1998	1	21 JAN 1998
2	03 MAR 1998 S T	2	03 MAR 1998 S T
3	20 APR 1998 S T	3	20 APR 1998 S T



SWENSON

Swenson Process Equipment Inc.
15700 Lathrop Ave. Houston, TX 77059
Phone 708 331 5500 Fax 708 331 5559

CUSTOMER P O #4500032313

CONTRACT 97025 03	TITLE GENERAL ARRANGEMENT
DR FJH ST DATE 21 JAN 1998	ELEVATION VIEW "A-A"
CH ST DATE 03 MAR 1998	SODIUM FORMATE F C CRYSTALLIZER
APPR	FOR HOECHST CELANES
SCALE 3/8 1 0	BISHOP TEXAS
	SD-100195-81

NOTES
FOR GENERAL ARRANGEMENTS PLAN VIEW SEE DWG SC 98983
FW INDICATES FIELD WELD
FW3 INDICATES FIELD WELD WITH 3 EXTRA ALLOWED FOR FIT UP IN FIELD

-THIS PRINT CERTIFIED CORRECT-
SWENSON PROCESS EQUIPMENT INC HA VEY IL
C O NO 4500032313 BY JH
CONT NO 97025 03 DATE 09 16 98

#93065

ITEM	QUAN	SIZE	DESCRIPTION
1	1	10 0 0 F C	VAPOR BODY
2	1	28	SLURRY OUTLET
3	1	28	SLURRY INLET
4	1	20	VAPOR OUTLET
4A 4B	2	24	ASME BETTS MANHOLE
5A 5B 5C 5D 5E	5	6	PRESSURE PRODUCTS SIGHT GLASS
6	1	150W R F	MESH WASH CONN
7	1	150W R F	PRESSURE GAUGE CONN
8A 8B	2	1	150W R F LEVEL TRANSMITTER CONN
			NOT USED
10A 10B	2	1	150W R F MESH DELTA P CONN
24	1	2	150W R F VENT CONN
26	1	3	150W R F WASH RING FEED INLET
			4 10 0 0 HORIZONTAL HEAT EXCHANGER
11	1	28	SLURRY INLET
12	1	28	SLURRY OUTLET
13	1	10	150W R F VAPOR INLET
14	1	3	150W R F CONDENSATE OUTLET
			NOT USED
16A 16B	2	1 1/2	150W R F LEVEL CONTROL CONN
17	1	1 1/2	150 W R F VENT CONN
18A 18B	2	1	150W R F LEVEL GAUGE CONN
19	1	2	150W DRAIN CONN
20	1	2	150W R F FILTRATE CONN
21	1	3	150W R F SLURRY OUTLET
22	1	1 (TW)	THERMOWELL TEMP TRANSMITTER CONN
23	1	1 (TW)	THERMOWELL TEMPERATURE SENSOR CONN
25A 25B	2	2	150W R F STUDDING PAD OUTLET WASHOUT CONN
26A 26B	2	3	150W R F STUDDING PAD OUTLET - PRESSURE SENSOR CONN
27	1	1 (TW)	THERMOWELL TEMP TRANSMITTER CONN
29	1	16	150W R F CONDENSATE POT CONN
30A 30B	2	3	150W R F BLEED

NO	GRD	W O NO	B M NO	DESCRIPTION	BY	CHK D	PROJ MGR	GRP LDR	PLANT ENGR	DATE
1		51229		ADDED 3/4 NOZZLES FOR BLEEDING	MAX	MAX	ACP			11 99
REVISIONS										

V 100 CRYSTALLIZER AND HE 3063 REBOILER PLAN VIEW

130 EQ 358

BM NO	W O NO	51229
ACCT NO	EST NO	
DRAWN BY	MAX	DATE 10 99
CHECKED BY	ACP	DATE 10 99
PROJECT ENGINEER		DATE
GROUP LEADER		DATE
PLANT ENGINEER		DATE

Hoechst Celanese
ENGINEERING PLASTICS DIVISION
BISHOP TEXAS
ENGINEERING DEPARTMENT

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TITLE
V-300 CRYSTALLIZER
AND HE-3063 HEATER
SFRU(2) ELEVATION

AREA 130	UNIT SFRU	SCALE	DRAWING NUMBER
TYPE O DRAWING	EQUIPMENT	NT J	130-EQ-364

CAED NO 0130 0 073