MECHANICAL DATASHEET

FOR

SOUR WATER STRIPPER

T70-C-0102

			EFC	DGG	HNR
00	02/06/22	ISSUED FOR CONSTRUCTION	EFC	DGG	HNR
Rev	Date	Description	Prep	Chk	App
TRMP Revision History					
This document is based on FEED document T70-C-DAT-PP-108913					

FOR ARRANGEMENT DRAWING REFER TO SHEET 006 OF 006

NOZZLE & MANWAY SCHEDULE

MARK	SIZE	SERVICE	ASME CLASS	MARK	SIZE	SERVICE	ASME CLASS
N1	6"	SOUR WATER IN	300# S.R. RFWN	K1A/B	3"	LEVEL - ESD	300# S.R. RFLWN
N2	6"	STRIPPED WATER	600# S.R. RFWN	K2A/B	2"	LEVEL - DCS	300# S.R. RFLWN
N3	12"	SOUR GAS OUT	300# S.R. RFLWN	K3	3"	PRESSURE TRANS'R	300# S.R. RFLWN
N4A	8"	REBOILER FEED #1 (NOTE P11)	300# S.R. RFWN	K4A/B	3"	DIFF PRESSURE TRANS.	300# S.R. RFLWN
N4B	8"	REBOILER FEED #2 (NOTE P11)	300# S.R. RFWN	K5	2"	THERMOWELL (NOTE P18)	300# S.R. RFLWN
N5A	10"	REBOILER RET'N #1 (NOTE P11)	300# S.R. RFWN	K6	2"	THERMOWELL (NOTE P18)	300# S.R. RFLWN
N5B	10"	REBOILER RET,N #2 (NOTE P11)	300# S.R. RFWN	K7	2"	THERMOWELL (NOTE P18)	300# S.R. RFLWN
N6	4"	LIVE STEAM	300# S.R. RFLWN	K8	2"	THERMOWELL (NOTE P18)	300# S.R. RFLWN
N7	4"	MIN FLOW (NOTE P19)	300# S.R. RFLWN	K9A/B	2"	LEVEL GAUGE, SKIMMING	300# S.R. RFLWN
N8	2"	VENT	300# S.R. RFLWN	M1	24"I.D	MANWAY	300# S.R. RFWN
N9	2"	UTILITY CONNECTION	300# S.R. RFLWN	M2	24"I.D	MANWAY	300# S.R. RFWN
N10	2"	FUTURE (ANTIFOAM) NOTE P9	300# S.R. RFLWN	M3	24"I.D	MANWAY	300# S.R. RFWN
N11	2"	FUTURE (pH CONTROL) NOTE P9	300# S.R. RFLWN	M4	24"I.D	MANWAY	300# S.R. RFWN
N12	2"	SKIMMING (NOTE P12, P16 & P24)	300# S.R. RFLWN				
N13	3"	DRAIN	300# S.R. RFLWN				

OPERATING CONDITIONS

INTERNAL PRESSURE:	NORMAL:	31.3 (NOTE P1)	psig
	MAXIMUM:	34.5 (NOTE P1)	psig
EXTERNAL PRESSURE:	NORMAL:	0	psig
	MAXIMUM:	0	psig
SERVICE	SOUR WATER (WET SOUR)		
If other (Specify)			
	NORMAL:	273 (NOTE P1)	Deg. F
TEMPERATURE:	MAXIMUM:	280 (NOTE P1)	Deg. F
SPECIFIC GRAVITY OF LIQUID:	0.92		
VESSELS TO BE MANUFACTURED IN ACCORDANCE WITH 32-SAMSS-004 AND APPLICABLE ADDENDUM.			

DESIGN CONDITIONS

ASME DESIGN CODE & EDITION:	ASME Section VIII Div. 1 Ed.2019 (U-Stamp)	
INTERNAL PRESSURE:	50 (NOTE 18)	psig
EXTERNAL PRESSURE:	FV (NOTE P25)	psig
TEMPERATURE:	330	Deg. F
M.D.M.T	34 (NOTE P26)	Deg. F
REINFORCEMENT	Integrally Reinforced (NOTE 39)	
WIND SPEED (50 year, 3-sec gust)	Exp. Cat : C, Importance Factor 1.15 90	mph
EARTHQUAKE: ZONE:	See Note 33	
EARTHQUAKE: SOIL COEFF:	See Note 33	
EARTHQUAKE: Av:	See Note 33	
CORROSION ALLOWANCE:	Nil (Vessel is cladded with min. 3.2mm thk SS 316L)	in
RADIOGRAPHY	HEADS: Full, SHELL: Full / Full	
IMPACT TESTING (IT):	○YES ◉NO ☐ CODE	
PWHT:	○YES ◉NO ☐ CODE ☐ SERVICE	
I. T. TEMPERATURE	As per code / specification	
I. T. ENERGY AVE./MIN:	As per code / specification	

It is the responsbility of the contractor to ensure filling of this data sheet in compliance to the detailed company standard and material specifications

MATERIALS OF CONSTRUCTION

COMPONENT	ASME NO:
SHELL:	
- BASE MATERIAL	SA-516 GR 70N
- CLADDING OR OVERLAY	SS 316 L
BOOT:	
- BASE MATERIAL	N/A
- CLADDING OR OVERLAY	N/A
HEADS:	
- TYPE	2:1 ELLIPSOIDAL
- BASE MATERIAL	SA-516 GR 70N
- CLADDING OR OVERLAY	SS 316 L
STANDARD FLANGES (NOTE 40):	SA-350 LF2 + 3.2mm UNDILUTED W.O. SS 316 L (MIN. 2 LAYERS) (HOLD)
PIPE:	SA-106 GR B + 3.2mm UNDILUTED W.O. SS 316 L (MIN. 2 LAYERS) (HOLD)
INT.L ATTACHMENT CLIPS:	SS 316 L
EXT.L ATTACHMENT CLIPS:	SA-516 GR 70N
STUD BOLTS:	SA-193 (B7M) (NOTE 23)
NUTS:	SA-194 (2HM) (NOTE 23)
INTERNALS:	SS 316 L
SUPPORTS:	
- SKIRT:	SA-516 GR 70N
- SADDLES:	N/A
- LUGS:	N/A
ANCHOR BOLTS (BY OTHERS)	ASTM F1554 Gr.36
GASKETS:	Note 5
FITTINGS:	SA-234 WPB + 3.2mm UNDILUTED W.O. SS 316 L (MIN. 2 LAYERS) (HOLD)
REINFORCEMENT RINGS	N/A
SPECIAL FORGINGS (NOTE 40):	SA-350 LF2 + 3.2mm UNDILUTED W.O
NAMEPLATE / BRACKET	SS 304 / SA-516 GR 70
LIFTING ~~LUG~~ / TRUNNIONS	SA-516 GR 70N
STIFFENING RING	SA-516 GR 70N

INSULATION FIREPROOFING & PAINTING

INSULATION THICKNESS:	HC (NOTE 15)		
FIREPROOFING THICKNESS:	See Notes 16 & 17		
SHOP PRIME & PAINT (SAPCS NO):	SAES-H-001 & 101V Note 7		
FIELD PRIME & PAINT (SAPCS NO): #	N/A N/A		
ESTIMATED VESSEL WEIGHTS:	(See Note 21)		
SHIPPING:	68895	lbs	
EMPTY:	117396	lbs	
OPERATING:	284947	lbs	
TEST:	104940	lbs	
ERECTION (NOTE 42):	68895	lbs	
CAPACITY	971.1	ft3	

NOTES:

SEE SHEET 004 & 006 OF 006

PROCESS DESIGN DATA SHEET - TRAYS

VESSEL ITEM NO.: (T70-C-0102, T70-C-0202 & T70-C-0302)

SERVICE: SOUR WATER STRIPPER

SECTION				
* TRAY NO(S)	2 to 5	6 to 9	10 to 13	14 to 17
* COLUMN ID, (ft)	4.25	4.25	4.25	4.25
* TOTAL TRAYS PER SECTION	4	4	4	4
* TRAY SPACING, (inch)	24	24	24	24
* TRAY TYPE	VALVE	VALVE	VALVE	VALVE
* TRAY EFFICIENCY	25%	25%	25%	25%
* NO. OF PASSES PER TRAY	1	1	1	1
* MAX. ALLOW △P PER TRAY (psi)	0.2	0.2	0.2	0.2

VAPOR TO TRAY NO.:				
TEMPERATURE, (^{o}F)				
PRESSURE, (psig)				
COMPRESSIBILITY FACTOR (Z)				
VISCOSITY, (cP)				
DENSITY, (lb/ft^3)				
MOLECULAR WEIGHT				
FLOW RATE - (lb/h)				
ACTUAL FLOW CONDITIONS				

SEE ATTACHMENT #1

LIQUID FROM TRAY NO.:				
TEMPERATURE, (^{o}F)				
MOLECULAR WEIGHT				
SURFACE TENSION, (lbf/in)				
VISCOSITY, (cP)				
DENSITY, (lb/ft^3)				
FLOW RATE - (lb/h)				
ACTUAL FLOW CONDITIONS				

FOR NEW LOADING PROFILE AND LOADING, SEE ATTACHMENT 1. (BASED ON LAST SIMULATIONS)

FOAMING TENDENCY: **NONE** **MODERATE** **HIGH** NOTE P7 **SEVERE**

GENERAL:

TRAYS NUMBERED TOP TO BOTTOM BOTTOM TO TOP X

PERCENT OF FLOOD NOT TO EXCEED NOTE P14 % AT MAXIMUM DESIGN VAPOR AND LIQUID RATES

VESSEL MANWAY ID SEE SHEET 2 in

** TRAY DECK GAUGE / MATERIAL SS 316L

** DOWNCOMER GAUGE / MATERIAL SS 316L

** CAP OR VALVE GAUGE / MATERIAL SS 316L

NOTES:

** THESE ARE PRELIMINARY DATA TO BE SUPPLIED BY DESIGN ENGINEER AND VERIFIED BY TRAY MANUFACTURER.

TRAYS ARE TO BE MANUFACTURED IN ACCORDANCE WITH 32-SAMSS-020.