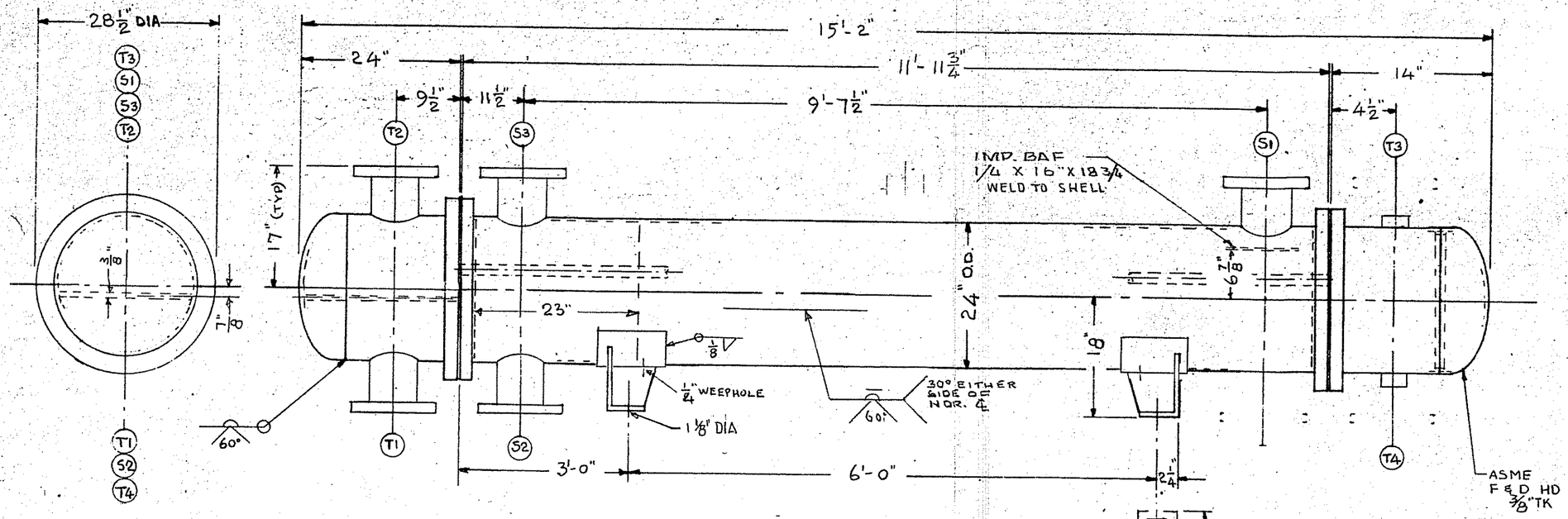

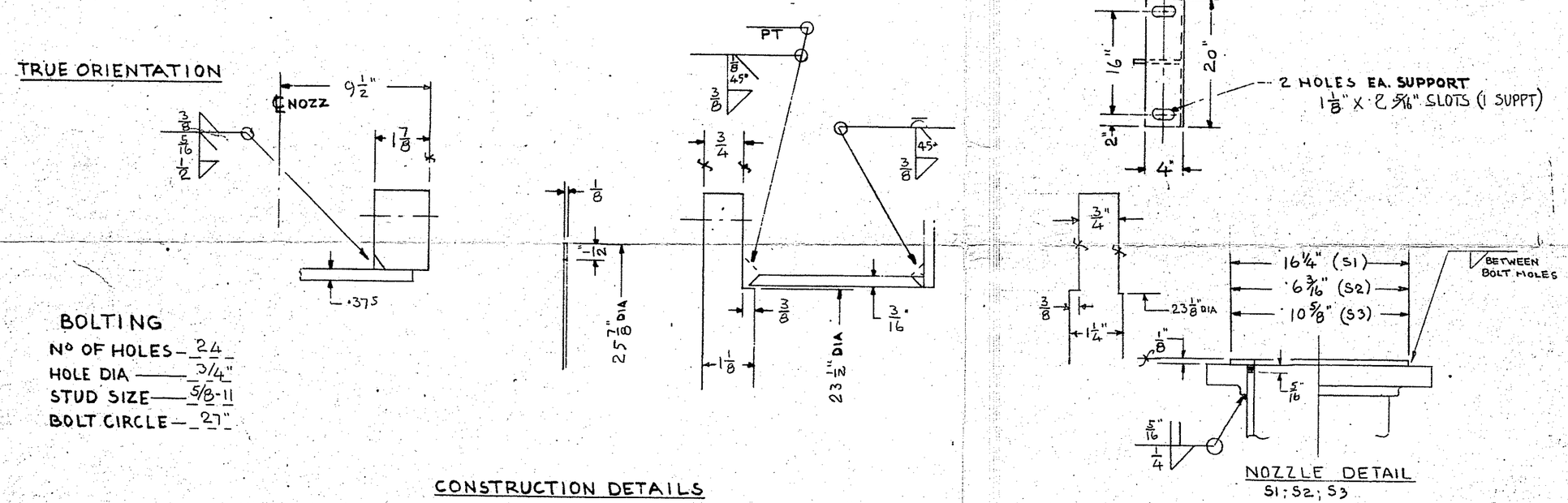

BOLTING

Nº OF HOLES — 24

HOLE DIA — ¾"

STUD SIZE — ⅝-11

BOLT CIRCLE — 27"

CONSTRUCTION DETAILS

CONSTRUCTION TO COMPLY WITH ASME CODE SECT. VIII 1965 ED. INCLUDING CERT. AND STAMP (FORM U-1) ☒

TEMA CL. C ☒

FOR INSTALLATION IN STATE OF N.C.

SHELL SIDE	CONDITIONS	TUBE SIDE
75	DES. PRESS. (PSIG)	75
300	DES. TEMP. (°F)	300
125	TEST PRESS (PSIG)	113
	DESIGN FLUID	
XYLENE & INERTS		WATER

0 CORR. ALLOW. (EXCEPT TUBES) 1/16"

Low Temp. Service-See Fab. Note B ☐

Designed per UCS-66 (NO IMPACT TEST) ☐

Halogen Test @ PSIG PER SA-7540 ☐

Dehydrate ☐

Air and Soap Test Reinf. Pads ☐ Facings ☐

WEIGHTS (lbs.) Empty: 4680 Flooded: 7070

FABRICATION NOTES

S=Req'd. in Shell C=Req'd. in Channel NR=Not Required

			S	C	NR
A	X-Ray - Spot	☐ Full ☐			☒
B	Impact Test	Weld Metal / Base Metal			☒
C	Post Weld Heat Treat				☒
D	Sandblast C.S. After Fab (SEE-A-11138)	Ext. / Int.	☒		
E	Pickle				☒
F	Paint Exterior C.S. One Shop Coat PER-A-11138		☒		

			Req'd.	NR
G	Tube End Welding	SA-8571	Manual / Automatic	☒
H	Tube Hole Grooving	SA-8480		
J	Customer's Nameplate			
K	Nozzle Protection: TEFLON TAPE ALL SCREWED CONN.		M&L Std. ☒	
L	Spare Parts: 4 SETS GASKETS TAGGED WITH O.D., I.D., STYLE & MAT'L			
M	PAINT EQUIP. Nº ON OUTSIDE OF VESSEL WITH LETTERS AT LEAST 2" HIGH			

CARBON STEEL: A 53 B, A 106 B, A 285 C, A 212 B, A 181 I, A 105 I

STAINLESS STEEL TYPE 316

SHELL					A 312	A 240	A 182	ELC
Barrel						☒		
Shell Flg.								
End Plate								
Formed Hd.								
Nozzle Nk.					☒	☒		
Nozzle Flg				☒				
Exp. Joint								
Cone								
Reinf. Pad								
Weld Ftgs.								
Scr. Ftgs.								
FACINGS						☒		

BONNET OR CHANNEL							
Barrel							
Chan. Flg.			☒				
End Plate							
Formed Hd.		☒					
Nozzle Nk.	☒						
Nozzle Flg				☒			
Cover							
Cone							
Reinf. Pad							
Weld Ftgs							
Scr. Ftgs.				☒			

	C. STL			S. STL			
	A 285 C	A 212 B		A 240	ELC		
Tube Sheet				☒			
	C.S.			S.S.			
Tubes AVG ☒ Min ☐	A 214	A 179	A 249	A 213	ELC		
	☒						
Studs A193-B7	☒		Nuts A194-2H		☒		
Gaskets Comp. Asb.						1/8 ☒	1/16
						CS	SS
Dbl. Jkt. Asb. Fill							
Spiral Wound							
Packing	Neoprene						
						CS	SS
Baffles							☒
Tie Rods, Spacers							☒
Impingement Baf.							☒
Pass Partitions						☒	
Unit Supports						☒	
Support Pad						☒	
Sealing Strips S.S. 302							

MATERIAL NOTES

Stainless Steel is of the type shown in Column heading unless indicated otherwise

A-312 is welded pipe unless indicated by "S" (For Seamless)

The letter "F" indicates facing of material under which it appears.

Carbon Steel A53 Gr. B is Seamless Pipe

NOZZLE SCHEDULE (NOZZ. FLG-ASA EXCEPT AS NOTED)

MK	SIZE	RTG#	FACE	TYPE	NECK	REMARKS	SERVICE
S1	14"	150	–	S.O.	3/16"	SEE RET	INLET
S2	4"	150	–	S.O.	S/40S	↓	OUTLET
S3	8"	150	–	S.O.	3/16"	↓	VENT
S4							
T1	6"	150	RF	S.O.	S/40	–	INLET
T2	6"	150	RF	S.O.	S/40	–	OUTLET
T3	¾"	3000	–	HC	PLUG	–	VENT
T4	¾"	3000	–	HC	PLUG	–	DRAIN

REV	DESCRIPTION	BY	DATE	CK.
2	CHG'D NOTES D & F	DAR	3.31.67	
1	ADDED DETAILS	G	1/25/67	

REFERENCE DRAWINGS:

T.S. DRILLING TEMPLATE: ET-10063

★ BAFFLES H=HOR; V=VERT; D=SEE DET

No.	6	Pitch	18"		
Dia.	23 7/16"	Cut	45 %		
Tk.	1/4"	Cut★	V		

TUBES FOR U-TUBES LG.=LENGTH OVER BUNDLE

No.	424	Lg.	12'-0"
OD	¾"	Pitch	15/16" △
BWG	18	Passes	2

Certified Correct

Date: By:

Shop	Date		3/8	4/3				
CUST.	Sepia	–	–	–				
	Prints	4	8	8				
	Date	11/30	1/27	4/3				
Issued	Rev.	0	1	2	3	4	5	

CUSTOMER: HERCULES INC.

P.O. No.: 336-026-01092-11-000-FCD

ENGINEERS:

UNITS REQUIRED: 2

M&L SER. NO.	4829	4830
MAT'L. BD. NO.	2555	2556
TAG NO.	E-202-4	E 2202-4

+ 104025

B.P.F. Nº 37190

Insp. by Customer: Req'd. ☒ NR ☐

M&L JOB NO. 16371-4

MANNING & LEWIS ENGINEERING CO.
UNION, N. J.

24-144 STRIPPED OXID. SCRUBBER CONDENSER

TEMA TYPE BEM HOR

SCALE	MADE	CKD.	DATE	DRAWING NO
~	G		11/28/66	C-10062-2