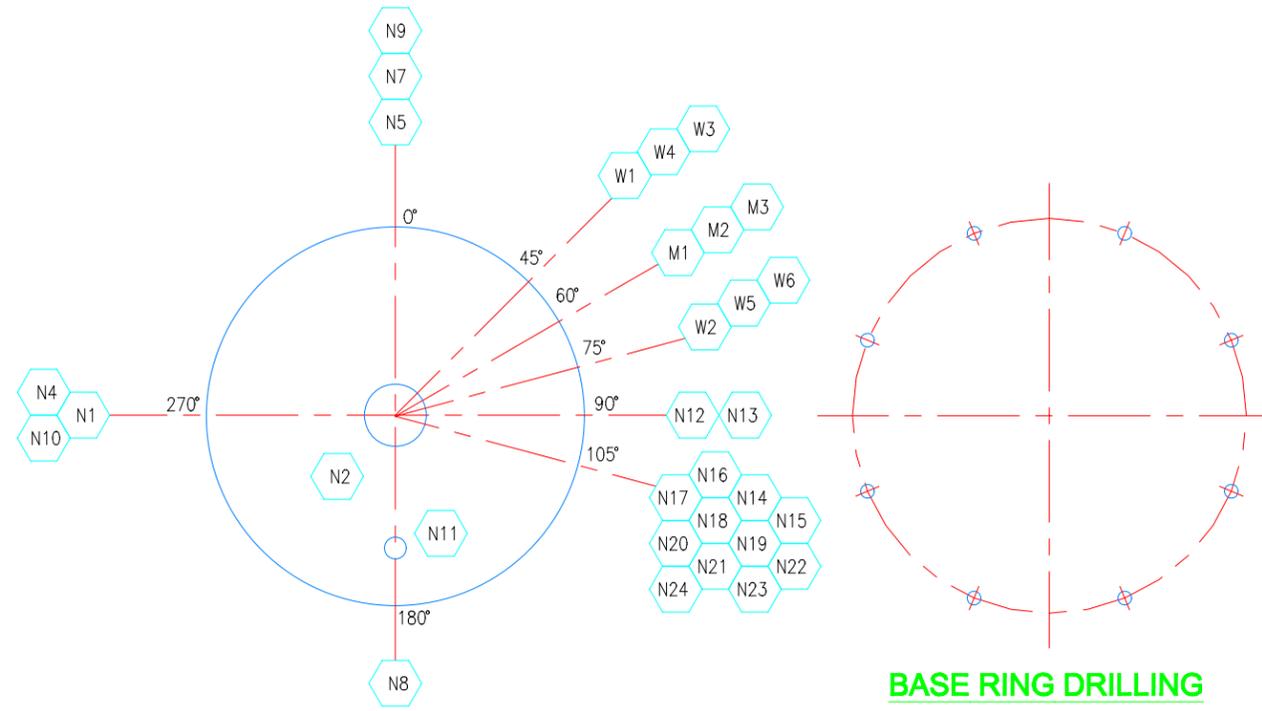


DO NOT SCALE THIS DRAWING



PLAN

BASE RING DRILLING

NOTES:

- THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN & STRUCTURAL INTEGRITY OF THE TANK.
- WIND AND SEISMIC LOAD PER BOCA 1996.
SNOW LOAD: $P_g = 20$ PSF
- ALL NON CONTACT SURFACES TO BE CARBON STEEL.
- ALL EXPOSED CARBON STEEL TO BE SANDBLASTED TO NEAR WHITE METAL AND PRIMED WITH INORGANIC ZINC METAL PRIMER TO A 3-MIL DRY FILM THICKNESS.
- VESSEL TO CLEANED INSIDE AND OUTSIDE, FREE OF DIRT, GREASE, MILL SCALE AND WELD SPLATTER PER TKS STANDARD GF-1, SECTION 8 CLEANING AND PAINTING, CLASS III.
- VENDOR TO SUPPLY 12 BRACKETS FOR PLATFORMS AND 6 BRACKETS TO SUPPORT FIRE PROTECTION PIPING. LOCATIONS TO BE DETERMINED AT TIME OF VESSEL FABRICATION.
- ALL CARBON STEEL PARTS ATTACHED TO STAINLESS STEEL PARTS SHALL BE ATTACHED USING 304L STAINLESS STEEL. SCAB PLATES SHALL BE USED WITH ATTACHMENTS FOR VESSEL WALL THICKNESS OF 3/16" OR LESS. 304L STAINLESS STEEL PARTS MAY BE USED INSTEAD OF CARBON STEEL AT THE VENDORS OPTION.
- ALL NOZZELS SHALL BE SQUARE, PLUMB, AND ACCURATELY LOCATED TO THE FOLLOWING TOLERANCES:
 - A.) OVERALL DIAMETER AND HEIGHT: $\pm 1/2"$
 - B.) FLATNESS: $\pm 1/4"$
 - C.) NOZZLE LOCATION: $\pm 1/4"$ FROM CENTERLINES
 - D.) PROJECTION: $\pm 1/8"$ FROM OUTSIDE SHELL TO FACE OF NOZZLE
 - E.) FLANGE FACES: $1/2"$ IN ANY PLANE
- VESSEL INTERNALS SUPPLIED BY OTHERS FOR INSTALLATION BY THE SITE CONTRACTOR.
- DISTALLATION INTERNALS PROVIDER TO SUPPLY REQUIREMENTS FOR TRAY AND DOWNCOMER ATTACHMENTS.
- TRAYS PROVIDED WITH INLET BAFFLE ABOVE TOP TRAY AND SEAL PAN BELOW BOTTOM TRAY. ATTACHMENTS.
- FABRICATOR SHALL PROVIDE AND ORIENT (6) EA. 2" SCH. 40 SKIRT VENTS APPROX. EQUAL SPACING AND TO CLEAR ALL SKIRT OPENINGS, SEAMS, SUPPORT CLIPS, ETC.

NOZZLE SCHEDULE							DESIGN DATA		
MK	SIZE	RATING	FACING	PROJ.	SERVICE	REMARKS	CODE: ASME VIII DIV 1 STAMPED AND REGISTERED		
N1	20"		BUTT WELD	6"	VAPOR IN	FR ET-4102	TOP		BOTTOM
N2	20"		BUTT WELD	6"	VAPOR OUT	TO ET-4103	SPECIFIC GRAVITY/CONTENTS: 0.795		0.9
N3					DELETED		OPERATING PRESS.: 53.45 (psia)		56.45 (psia)
N4	6"	150 LB	LJ FLG	6"	FEED IN	FR EP-4108	OPERATING TEMP.: 240 (°F)		288.7 (°F)
N5	6"	150 LB	LJ FLG	6"	REFLUX	FR PC-4106	DESIGN PRESS.: 75/FV (psig)		DESIGN TEMP.: 400 (°F)
N6	16"	150 LB	LJ FLG	6"	RECTIFIER BOTTOMS	TO ET-4102	MDMT: -20°F		
N7	2"	150 LB	LJ FLG	6"	FUSEL OIL DRAIN	TO EP-4108	CORROSION ALLOWANCE: NONE		
N8	2"	150 LB	LJ FLG	6"	FUSEL OIL DRAIN	TO EP-4108	No. & TYPE OF TRAYS: 32 TRAYS, SULZER MVG		
N9	2"	150 LB	LJ FLG	6"	FUSEL OIL DRAIN	TO EP-4108	STRESS RELIEF:		
N10	1.5"	150 LB	RFSO	6"	VENT	FR TP-4108	TESTS: (gal)		
N11	4"	150 LB	LJ FLG	6"	PRESS. REL. VALVE	PSV-018	WIND: BASIC WIND SPEED: 80 MPH WIND IMPORTANCE FACTOR: 1.0		SEISMIC: $A_y = 0.05$ $A_o = 0.05$
N12	3"	150 LB	WELD PAD	N/A	COL. BOTTOM LEVEL	LT-006	WEIGHT EMPTY: (lbs)		
N13	3"	150 LB	WELD PAD	N/A	COL. BOTTOM LEVEL	LT-006	WEIGHT FLOODED: (lbs)		
N14	3"	150 LB	WELD PAD	N/A	COL. TOP PRESS.	PT-017	VOLUME: (gal)		
N15	3"	150 LB	WELD PAD	N/A	COL. BOTTOM PRESS.	PT-009	WEIGHT INSULATION:		
N16	3"	150 LB	LJ FLG	6"	HIGH LEVEL ALARM	LS-008			
N17	1.5"	150 LB	WELD PAD	N/A	PLATE 31 TEMP	TE-010			
N18	1.5"	150 LB	WELD PAD	N/A	PLATE 27 TEMP	TE-011			
N19	1.5"	150 LB	WELD PAD	N/A	PLATE 25 TEMP	TE-013			
N20	1.5"	150 LB	WELD PAD	N/A	PLATE 23 TEMP	TE-012			
N21	1.5"	150 LB	WELD PAD	N/A	PLATE 21 TEMP	TE-014			
N22	1.5"	150 LB	WELD PAD	N/A	PLATE 7 TEMP	TE-015			
N23	1.5"	150 LB	WELD PAD	N/A	PLATE 3 TEMP	TE-016			
N24	1.5"	150 LB	WELD PAD	N/A	COL. BOTTOM TEMP	TE-005			
M1	24"				MANWAY W/ HINGE OR DAVIT				
M2	24"				MANWAY W/ HINGE OR DAVIT				
M3	24"				MANWAY W/ HINGE OR DAVIT				
A1	26"	ATMO.	PLAIN	3"	SKIRT PENETRATION FOR N6				
A2	24"	ATMO.	PLAIN	3"	SKIRT ACCESS				
A3	3"	ATMO.	PLAIN	3"	FIRE PROTECTION				
W1			WELD PAD	N/A	SIGHT GLASS W/ 4" VIEW				
W2			WELD PAD	N/A	SIGHT GLASS W/ 4" VIEW				
W3			WELD PAD	N/A	SIGHT GLASS W/ 4" VIEW				
W4			WELD PAD	N/A	SIGHT GLASS W/ 4" VIEW				
W5			WELD PAD	N/A	SIGHT GLASS W/ 4" VIEW				
W6			WELD PAD	N/A	SIGHT GLASS W/ 4" VIEW				

SPECIFICATIONS:

GF-1: GENERAL FABRICATION STANDARDS FOR PRESSURE VESSELS & HEAT EXCHANGERS

REF. DWG'S:

- 6018-MQ-4115 Sht 2 of 2
- 6018-MD-4001

NOZZLE LOADS					
MK	Fr (lbs)	Mr (ft/lbs)	MK	Fr (lbs)	Mr (ft/lbs)
N1	5800	9870	N4	1500	2394
N2	5800	9870	N5	1500	2394
			N6	5200	8779

MATERIALS OF CONSTRUCTION

ITEM	MATERIAL	COMMENTS
SHELL	304L SS	
HEADS	304L SS	2:1 ELLIPTICAL
JACKET	N/A	
CLADING/LINER	N/A	
INTERNAL SUPPORTS	304LSS	TRAY SUPPORTS/DOWNCOMERS
GASKETS	IFG5500	
BOLTING	SA-193-B7/S14-194-2H	CAD PLATED
LADDER	CS	CLIPS ONLY
PLATFORMS	CS	CLIPS ONLY
VESSEL SUPPORTS	CS	SKIRT
PIPING SUPPORTS	CS	CLIPS ONLY
PAINT:	SEE SPEC GF-1-73338 CL-1	
SURFACE PREP:	SEE SPEC GF-1-73338 CL-1	
INSULATION:	2" FG-TOP HEAD Ca Si	PURCHASER TO PROVIDE

CONFIDENTIAL

RECTIFYING COLUMN - PLAN

Evaporation/Distillation/Chemical Reaction/Process Design & Energy Conservation
667 Tiftt Street Buffalo, NY 14220

EQUIPMENT No.:	TW-4102
PROJECT No.:	73338
PROJECT NAME:	CENTRAL ILLINOIS
SHEET No.:	1 of 2
DRAWING No.:	6018-MQ-4115
REV.:	B

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SCALE: NONE SIZE: B

DRAWN BY: JEM DATE: 5-23-06 CHECKED BY: DATE: REV.:

REV	REVISION	DATE ISSUED	CHK BY	CLIENT APPD
B	ISSUED FOR REVIEW & COMMENT	7-14-06	KAR	JL
A	ISSUED FOR BID	6-23-06	RJS	-

B-SIZE (11x17)