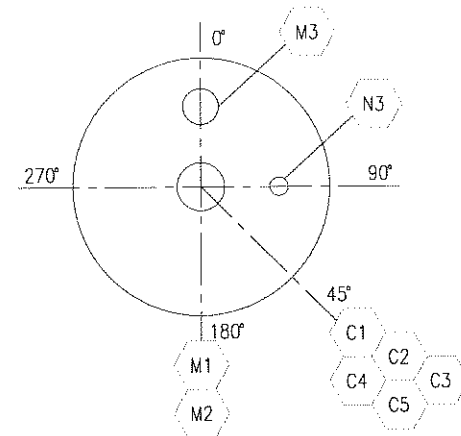
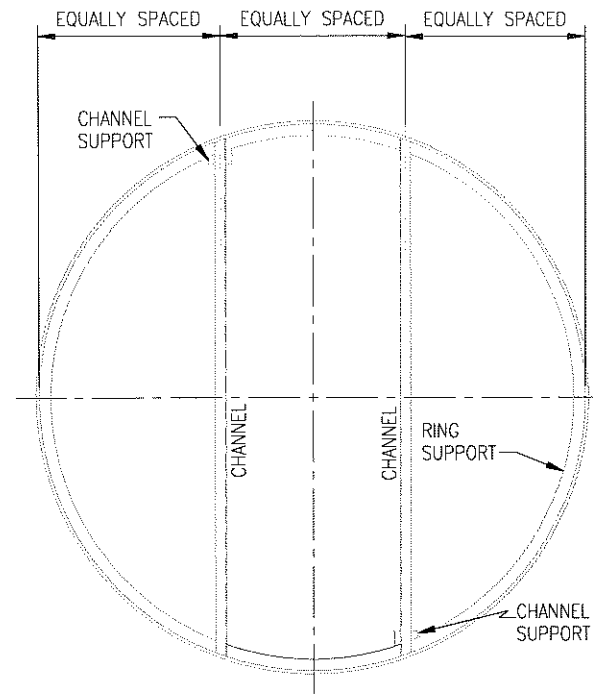


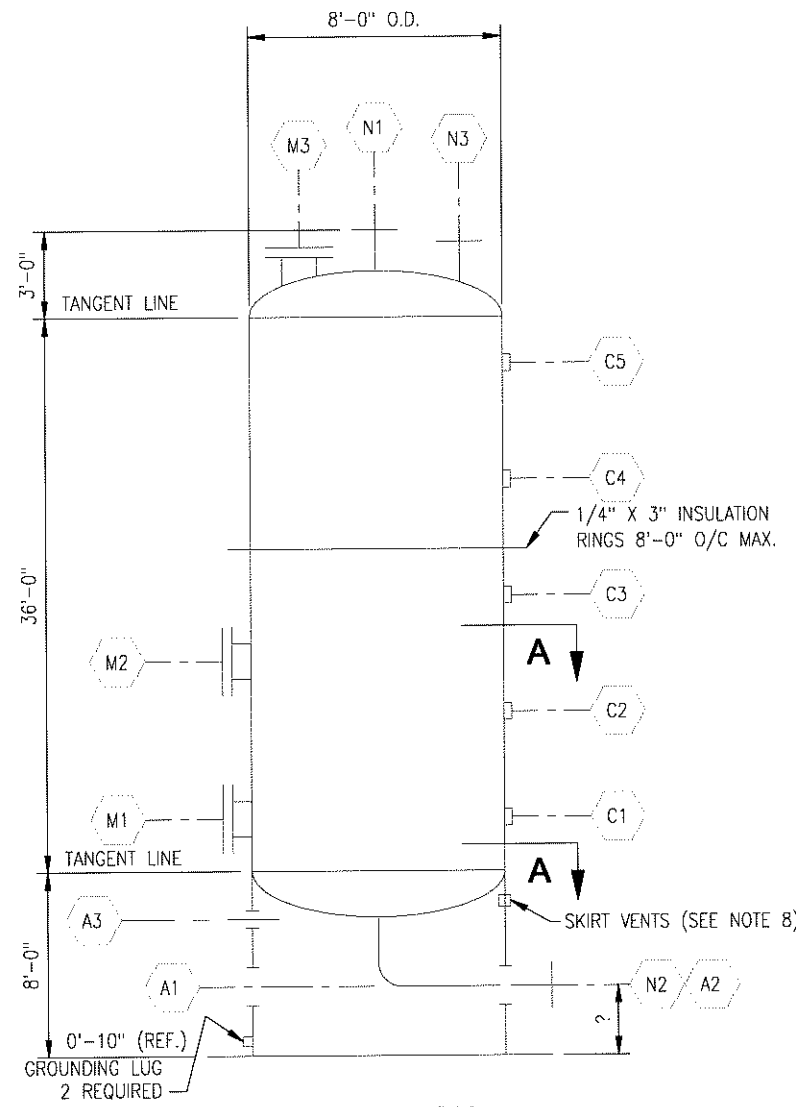
DO NOT SCALE THIS DRAWING



PLAN



SECTION 'A-A'  
SUPPORT RING AND BEAMS FOR JOHNSON GRID  
TYPICAL 2 PLACES



ELEVATION

NOZZLE SCHEDULE							DESIGN DATA	
NO.	SIZE	PATHING	FACILITY	PROJ.	SERVICE	REMARKS	CODE: ASME VIII DIV 1 STAMPED AND REGISTERED	
N1	14"	150 LB	RFSO	9"	VAPOR FEED	FR TP-4301	SPECIFIC GRAVITY/CONTENTS: 0.77 AS LIQ., 0.284 #/FT <sup>3</sup> AS VAPOR	
N2	14"	150 LB	RFSO	9"	VAPOR OUTLET	TO TP-4302	DESIGN PRESS.: 75/FV (psig)	DESIGN TEMP.: 450 (°F)
N3	3"	150 LB	RFSO	6"	RELIEF VENT	PSV 4301-021	OPERATING PRESS.: 49 (psio)	OPERATING TEMP.: 310 (°F)
C1	1"	3000 LB	FNPT	N/A	TEMP. TRANSMITTER	TE-026	MDMT: -20F	
C2	1"	3000 LB	FNPT	N/A	TEMP. TRANSMITTER	TE-025	CORROSION ALLOWANCE: 1/16"	
C3	1"	3000 LB	FNPT	N/A	TEMP. TRANSMITTER	TE-024	No. & TYPE OF TRAYS: JOHNSON SUPPORT GRID, GRACE 562E1 BRADS	
C4	1"	3000 LB	FNPT	N/A	TEMP. TRANSMITTER	TE-023	STRESS RELIEF:	
C5	1"	3000 LB	FNPT	N/A	TEMP. TRANSMITTER	TE-022	TESTS:	
M1	24"			6"	MANWAY W/DAVIT OR HINGE		WIND: BASIC WIND SPEED: 80 MPH WIND IMPORTANCE FACTOR: 1.15 WIND EXPOSURE: C	
M2	24"			6"	MANWAY W/DAVIT OR HINGE		SEISMIC: A <sub>v</sub> = 0.05 A <sub>o</sub> = 0.05	
M3	24"			6"	MANWAY W/DAVIT OR HINGE			
A1	26"	ATMO.	PLAIN	3"	SKIRT PENETRATION FOR N2		WEIGHT EMPTY: (lbs)	WEIGHT FLOODED: (lbs)
A2	24"	ATMO.	PLAIN	3"	SKIRT ACCESS		VOLUME: (gal)	
A3	3"	ATMO.	PLAIN	3"	FIRE PROTECTION		WEIGHT INSULATION:	

NOTES:

- THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN & STRUCTURAL INTEGRITY OF THE TANK.
- WIND AND SEISMIC LOAD PER BOCA 1996  
SNOW LOAD, P<sub>s</sub> = 20 PSF
- ALL NON-CONTACT SURFACES TO BE CARBON STEEL
- FABRICATOR TO SUPPLY BRACKETS FOR VENDOR NAMEPLATE AND THERMAL KINETICS SYSTEMS NAMEPLATE
- 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 NOZZLES SHALL BE SQUARE, PLUMB, AND ACCURATELY LOCATED TO THE FOLLOWING TOLERANCES:  
TO FACE OF NOZZLE  
A) OVERALL DIAMETER AND HEIGHT: ± 1/2"  
B) FLATNESS: ± 1/4"  
C) NOZZLE LOCATION: ± 1/4" FROM CENTERLINES  
D) PROJECTION: ± 1/8" FROM OUTSIDE SHELL  
E) FLANGE FACES: 1/2" IN ANY PLANE
- FABRICATOR TO PROVIDE VESSEL COMPLETE WITH LIFTING AND TRAILING LUGS FOR HANDLING AND ERECTION
- 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.

SPECIFICATIONS:

GF-1-73338: GENERAL FABRICATION STANDARDS FOR PRESSURE VESSELS & HEAT EXCHANGERS

REF. DWGS:

- 6018-MD-4001

NOZZLE LOADS

NO.	R <sub>r</sub> (lbs)	M <sub>r</sub> (ft/lbs)	W <sub>r</sub>	R <sub>r</sub> (lbs)	M <sub>r</sub> (ft/lbs)
N1	4400	6332			
N2	4400	6332			

MATERIALS OF CONSTRUCTION

ITEM	MATERIAL	COMMENTS
SHELL	CS	
HEADS	CS	2:1 ELIPTICAL
JACKET	NONE	
CLADDING/LINER	NONE	
INTERNAL SUPPORTS	CS	SUPPORTS
GASKETS	IFG5500	
BOLTING	SEE SPEC GF-1-73338	
LADDER	CS	
PLATFORMS	CS	
VESSEL SUPPORTS	CS	SKIRT

PAINT:	SEE SPEC GF-1-73338 CL-1
SURFACE PREP:	SEE SPEC GF-1-73338 CL-1
INSULATION:	3" FG-TOP HEAD Ca Si PURCHASER TO PROVIDE

ISSUED FOR CONSTRUCTION

CONFIDENTIAL

**MOLE SIEVE No. 2**

**THERMAL KINETICS**  
Engineering, PLLC & Systems, LLC

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

EQUIPMENT No.: TW-4302  
PROJECT No.: 73338  
PROJECT NAME: CENTRAL ILLINOIS  
SHEET No.: 1 of 1  
DRAWING No.: 6018-MQ-4304

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SPEC. No.: GF-1-73338 SCALE: NONE SIZE: B  
DRAWN BY: JEM DATE: 5-23-06 CHECKED BY: DATE: REV: 0

B-SIZE (11x17)