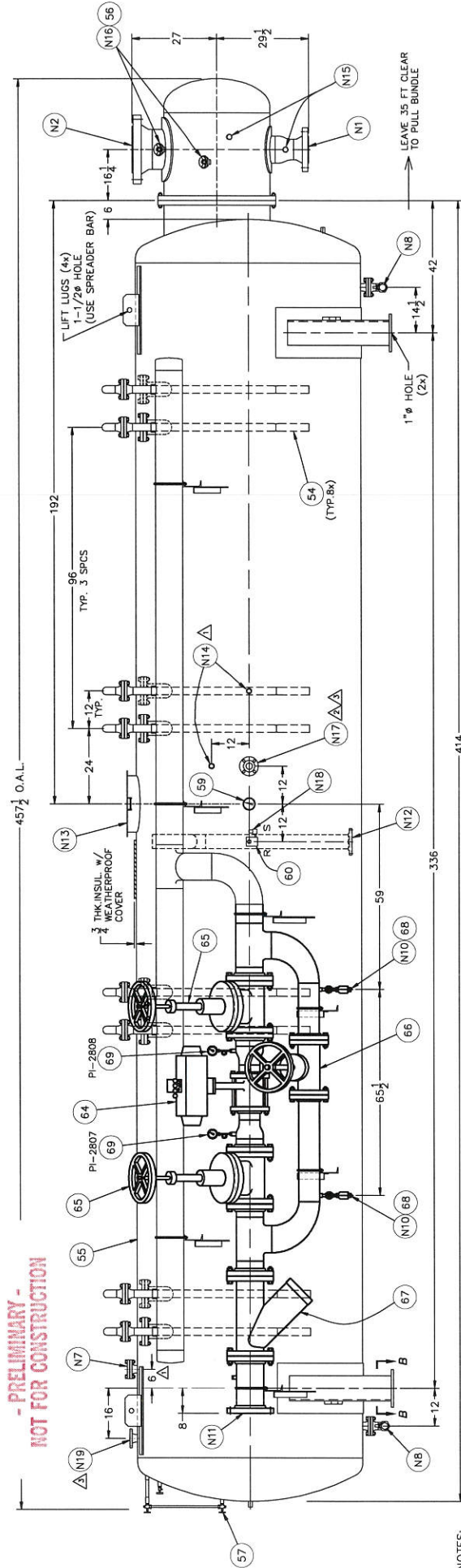
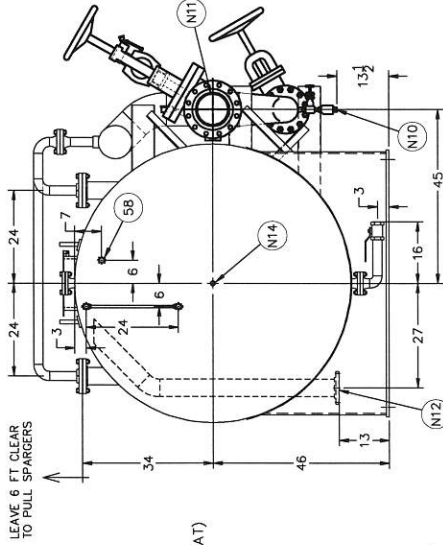
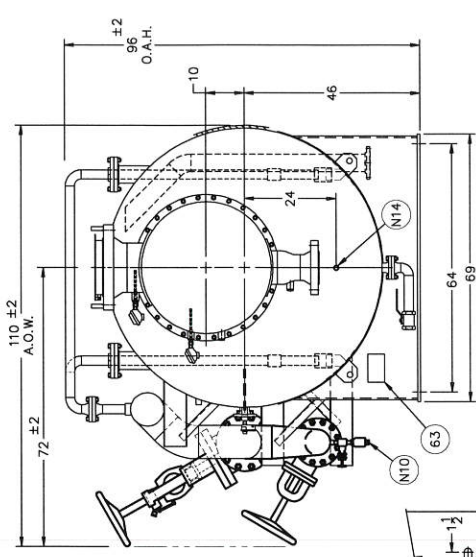


- PRELIMINARY -
NOT FOR CONSTRUCTION



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NOTES:
1) ASME SECT.VIII DIV 1, LATEST ADDENDA CODE STAMP + NB
A) MAIN BUNDLE, 720 PSIG, -320/+230°F.
PNEUMATIC TEST AT 97% PSIG AND NDE-PT.
(ALT. HYDRO TEST TO 1,168 PSIG)
B) SHELL, 15 PSIG, -20/+230°F.
HYDROSTATIC TEST AT 22-1/2 PSIG
(ALT) PNEUM. TEST AT 18 PSIG AND NDE-PT.
2) CORROSION ALLOWANCE: TANK Tc=1/8", STEAM PIPE Tc=1/8"
BUNDLE Tc=NONE
3) CLEAN ALL BUNDLES FOR OXYGEN SERVICE PER THERMAX C-5-1-T,
SEAL AND TAG. (ALPC SPEC. 7390-871-2)
4) PAINT SYSTEM:
PRIME PAINT (8 mil DFT, APPLIED 1-2 COAT) CARBOLINE 890
FINISH PAINT UNINSULATED SURFACES ONLY. (1.5-2 mil DFT, APPLIED 1 COAT)
CARBOLINE SUBSIL 30HS (WHITE #7812)
HI-TEMP ALUMINUM PAINT STEAM PIPING.
5) STEAM PIPING PER ALPC "W3" PIPING SPEC. DS 190-2.1
ESTIMATED WEIGHT 30000 LBS EMPTY, 83000 LBS FULL OF WATER.
BUNDLE WEIGHT - 12500 LBS.
6) FLANGE BOLT CIRCLE HOLES STRADDLE CENTER LINES.
7) NO EXTERNAL NOZZLE LOADS ALLOWED.
8) BUNDLE PRESSURE RELIEF VALVES ARE NOT PROVIDED BY THERMAX INC.
OVER PRESSURE PROTECTION OF THE BUNDLE IS THE RESPONSIBILITY OF
THE USER.
9) TANK INSULATION - 3/4" THK CLOSED CELL HALSTEAD (ALT: ARMAFLEX)
WITH WEATHERPROOF JACKET.
STEAM PIPING INSULATED BY OTHERS.



LEAVE 6 FT CLEAR
TO PULL SPARGERS

110 ± 2
A.O.W.

72 ± 2

69

64

24

10

± 2
O.A.H.

63

N10

N14

64"

TO-CTR

1"

SLOT
FOR 7/8"

BOLT

12

6

12

SECTION B-B
SLOT DETAIL

CUSTOMER : AIR LIQUIDE AMERICA CORPORATION
PLANT LOCATION : GEISMAR, LOUISIANA
CUSTOMER DWG NO: M164-72F
ALP&C DWG. NO. : 7390-0692-M164-72F-1-C

REV 3, 12/28/98 AB; CHG PER CUST COMMENTS (TRANS # 2309)
REV 2, 11/05/98 AB; ADDED RTD IN TANK
REV 1, 9/21/98 AB; CHG PER CUST COMMENTS (TRANS # 449)

REV.	NO.	DATE	BY	OF	CUSTOMER DRAWING
3		11/05/98	1	1	CUSTOM

M164-72F

Thermax Inc.
692 Dartmouth St., So. Dartmouth, MA 02748

STEAM SPARGED VAPORIZER
SP2000-BB
72" OD TANK x 6500 GAL (NOM)
TAG No.'s S16 + S26

SCALE: 1 : 24
DATE: 4/29/98

NO.	DESCRIPTION	TAG #
70	STEAM PRESSURE GAUGE, 0-600 PSIG	
69	DRIP TRAP w/ BLOCK VALVE	
68	8" 250# STEAM STRAINER w/ S.S. SCREEN	
67	6" 250# GLOBE VALVE (STEAM BY-PASS)	
66	6" 250# GATE VALVE (STEAM BLOCK)	
65	6" 250# STEAM CONTROL VALVE, w/ STELLITE TRIM	
64	6" 250# STEAM CONTROL VALVE, w/ STELLITE TRIM	
63	6" 250# STEAM CONTROL VALVE, w/ STELLITE TRIM	
60	POWERS ACCITEM PNEUM. TEMP. CONTROLLER w/WELL	
59	TEMP. GAGE, 0-220° F IN BRASS WELL	
58	TRY COCK, 1/2 MPT x NOZZLE, BRASS	
57	LEVEL GAGE, 5/8 OD GLASS x 24" CENTER, BRASS	
56	RTD SINGLE ELEMENT w/MONEL T'WELL, 1/2" FPT CONN.	
55	TANK, 72" OD x 408" LG (6500 US GAL)	
54	STEAM SPARGER HEAD C7-3-SS (STAINLESS STEEL)	

REV.	E.C.O. NO.	DATE	BY

NOZZLE CONNECTION SCHEDULE

N19	LEVEL SWITCH CONN.	2" 150# R.F. W/N FLANGE (L/S BY OTHERS)
N18	PNEUMATIC SUPPLY	(1x) 3/8" OD TUBE CONN. (SWAGELOK) . SUPPLY 100 PSIG CLEAN AIR
N17	RTD CONN. (TANK)	2" 150# R.F. W/N FLANGE (RTD BY OTHERS)
N16	RTD CONN. SINGLE ELEM (2x)	1/2" FPT CONDUIT, 100 OHM . 3 WIRE
N15	INSTRUMENT CONN.	(2x) 1" FPT 3000# w/ BRASS PLUG
N14	INSTRUMENT CONN.	(4x) 3/4" FPT 3000# w/ BRASS PLUG
N13	VENT/MANWAY	14 x 18 ELLIP. w/FLAPPER (DO NOT OBSTRUCT)
N12	CONDENSATE OVERFLOW	(1x) 4" 150# R.F. S/O FLG. (PIPE TO SAFE LOCATION)
N11	STEAM SUPPLY	8" 300# R.F. S/O FLG./ REQ'D STEAM FLOW: 32,750 LBS/HR, 100 PSIG SAT. STM.
N10	CONDENSATE TRAP	(2x) 1/2" FPT, PIPE TO SAFE LOCATION
N9		
N8	TANK DRAIN	(2x) 2" 150# FLG w/ 2" FPT HOV's
N7	TANK FILL	(1x) 2" 150# FLG w/ B.F. COVER
N2	GAS OUTLET	12" 600# R.F. W/N FLANGE
N1	LIQUID INLET	6" 600# R.F. W/N FLANGE

WARNING
HANDLING PRESSURIZED, HOT, CRYOGENIC AND/OR FLAMMABLE FLUIDS AND EQUIPMENT
REQUIRE SPECIAL PROCEDURES. READ AND FOLLOW ALL INSTRUCTIONS AND SAFETY PROCEDURES
FOR THE PROPER USE OF THIS EQUIPMENT.