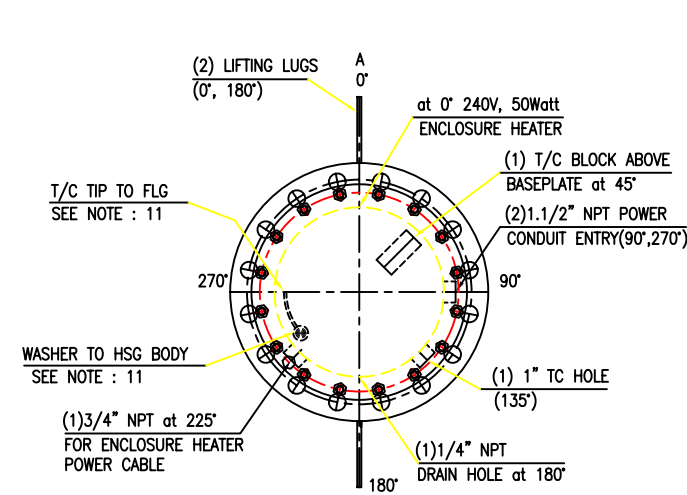


NOTE :

1. FLANGE BOLT HOLES STRADDLE HATUAL CENTERLINES OF HEATER
2. SI/metric units of measure are for reference only.
3. HYDROTEST ENCLOSURE @ 400 PSIG FOR (1) MINUTE.
4. HEATER DESIGNED FOR HORIZONTAL INSTALLATION IN 10 NPS SCH.STD PIPE(10.020" ID)
5. CONDUIT SEATS (by others) TO BE FIELD INSTALLED WITHIN 18" OF ENCLOSURE PER NFPA 70, CSA-C22.2 & LOCAL CODES.

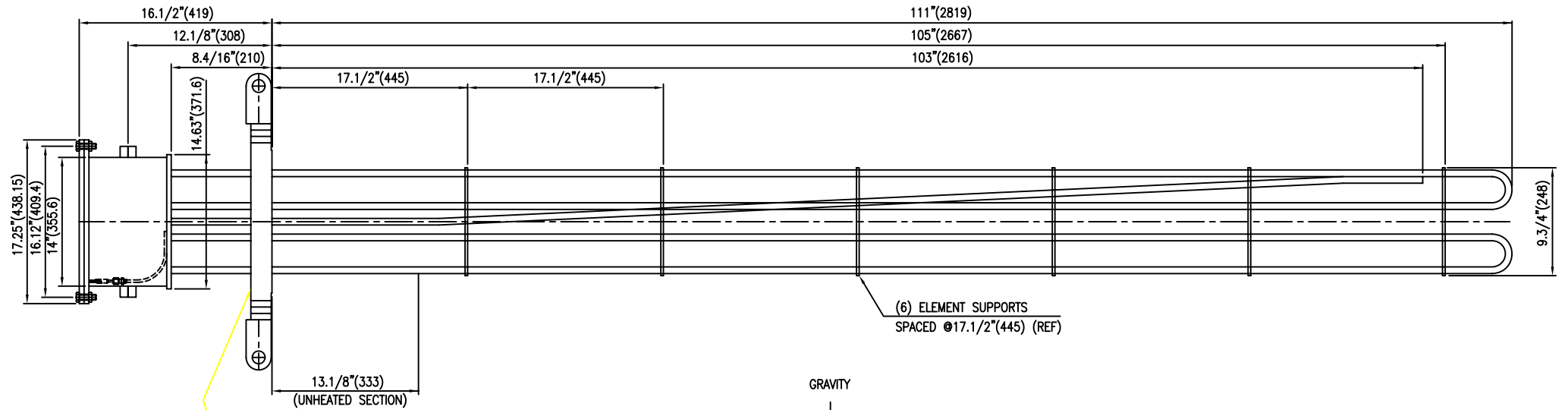
6. DESIGNED FOR INLET CENTERED 13.125" FROM FLANGE FACE AND OUTLET CENTERED 111" FROM FLANGE FACE.
7. CAUTION: ENSURE THAT THE LIMIT THERMOCOUPLE IS CONNECTED TO APPROPRIATE LISTED LIMIT CONTROLS.
8. CAUTION : ENSURE THAT INCOMING WIRING IS APPROPRIATELY RATED AND SIZED FOR ANTICIPATED ENCLOSURE TEMPERATURE PER LOCAL CODE.
9. ASME FLANGE CALCULATION BASED ON A NON-ASBESTOS SHEET 1/8" GASKET WITH SA193-B8 CL2 BOLTING.
10. DO NOT INSULATE BETWEEN FLANGE AND ENCLOSURE AS UNSAFE ENCLOSURE TEMPERATURES MAY RESULT.

Watlow	
Model No. 701-08184	Date 2008
Wattage 144 KW	Volts 400 ph 3
CUSTOMER P.O.:	
CAUTION: READ INSTALLATION MANUAL BEFORE POWERING. DO NOT OPEN WHEN ENERGIZED.	
"Building Industry Workhorse"	
WATLOW	
Hannibal, Missouri 63401 USA 573-221-2816 www.watlow.com	

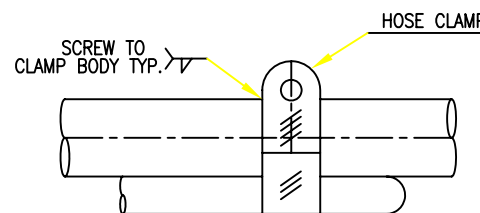


PRODUCT FEATURES

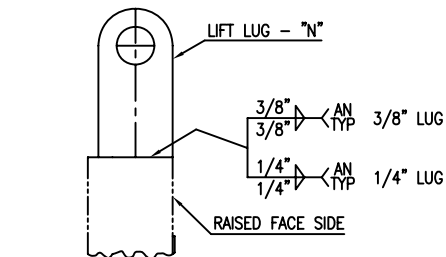
IMMERSION HEATER:	
MODEL NO. : 701-08184	
ELECTRICAL DATA:	
DUTY : 144 KW, 400V, 3PH	
ELECTRICAL CLASSIFICATION : ZONE 2 Exd IIA T3	
ELECTRICAL ENCLOSURE : ATEX explosion Proof type	
MAX. ANTICIPATED HOUSING TEMP : 40 °C	
ELECTRICAL CONNECTION(S) : 6 CIRCUITS, MAX. WIRE SIZE : 6 AWG	
PROCESS DATA:	
MEDIUM : AMMONIA	MEDIUM STATE : LIQUID
FLOW RATE : 55115.55 LB/HR (25000 KG/HR)	
INLET TEMP : -31.2 °C	
OUTLET TEMP : -27 °C	
OPERATING PRESSURE : 2177 KPAG	
ESTIMATED SHEATH TEMP. : 93.3 °C	
SUGGESTED LIMIT SET TEMP. : 204.4 °C	
DESIGN DATA:	
DESIGNED, MANUFACTURED & STAMPED IN ACCORDANCE WITH ASME SECTION VIII, DIV. 1, 2007 EDITION	
DESIGN PRESSURE : 2552 KPAG	
DESIGN TEMP : 75°C	
MDMT : -35°C	
HYDRO TEST PRESSURE : 555 PSIG (3830 KPAG)	
NDE : NONE	
CORROSION ALLOWANCE : 0 mm	
MATERIAL SPECIFICATIONS:	
FLANGE : 10 NPS CLASS 300, RF BUND, 304 S/S	
PER ASME B16.5 EXDEPT 2.250"(57mm) INCHES THICK	
HEATING ELEMENTS : 304 SS	
ELEMENT SUPPORTS : 304 STAINLESS STEEL	
ELECTRICAL ENCLOSURE : CARBON STEEL	
ENCLOSURE HARDWARE : ZINC PLATED	
ENCLOSURE PAINT : PRIMER ONLY	
FLANGE PAINT : NO PAINTING	
ELEMENT END SEAL : EPOXY	
HEATER SPECIFICATIONS:	
Q'TY & SIZE OF ELEMENTS : (36) 0.43" DIA. x STD" WALL	
WATT DENSITY / HEAT FLUX : 15.1 WPSI	
IMMERSED LENGTH (BUNDLE REMOVAL DISTANCE) : 111" (2819 MM)	
LIMIT THERMOCOUPLE : (1) ANSI TYPE "K" SINGLE, UNGROUNDED	
FLANGE HIGH LIMIT T/C : (1) ANSI TYPE "K" SINGLE UNGROUNDED	
WEIGHTS:	
ESTIMATED HEATER BUNDLE WEIGHT : 600 LB (272 KG)	



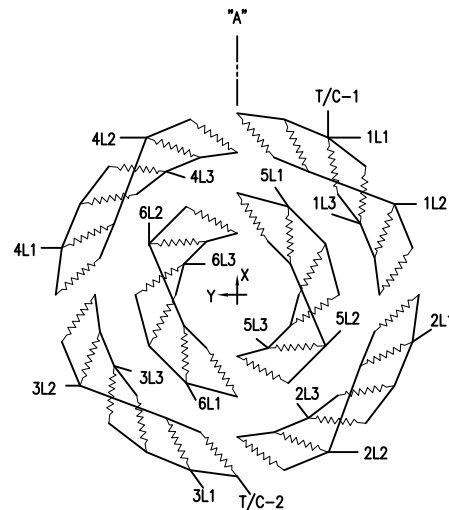
ASME INFORMATION
CERTIFIED BY WATLOW PROCESS SYSTEMS
SERIAL NUMBER : 701-08184
MAWP : 426.7 PSIG @ 122°F
MDMT : -31°F
YEAR BUILT : 2008



ELEMENT & SENSOR WELD DETAIL

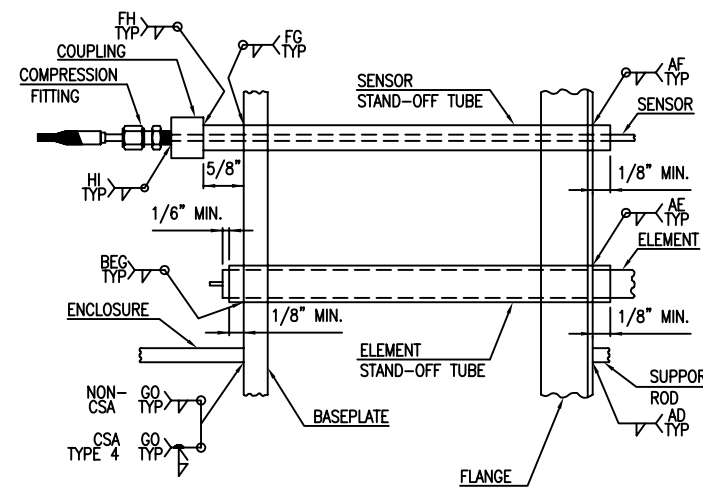


ATTACHMENT OF LIFTING LUG TO FLANGE



ELEMENT WIRING DIAGRAM

RESISTANCE / CIRCUIT
10.80 - 12.50 OHMS



ATTACHMENT OF SENSOR TIP TO ELEMENT

REV. DATE		DESCRIPTION	DEGN	CHEK	APPD
09.09.08.	FINAL	J.LEE	J.LEE	J.LEE	
09.07.29.	Revised by Comment	J.LEE	J.LEE	J.LEE	
09.07.02.	Revised by Comment	J.LEE	J.LEE	J.LEE	
09.06.02.	FOR APPROVAL	J.LEE	J.LEE	J.LEE	

EMPLOYER :		VDR CODE : G.2			
Ambatovy					
Dynatec Madagascar S.A.					
EMPLOYER ENGINEER :		SNC-LAVALIN			
PROJECT TITLE :		AMMONIA UNLOADING, STORAGE AND DISTRIBUTION SYSTEM			
CONTRACTOR :		DAEWOO INTERNATIONAL, DOOSAN, Doosan Mecatec, KOGAS-Tech			
SUBCONTRACTOR :		WATLOW KOREA Co.,Ltd. J SYSTEM			
DESIGNING BY	DATE	68-HE-5001A AMMONIA HEATER (144 Kw) BUNDLE DETAIL DRAWING			
CHECKED BY	DATE				
APPROVED BY	DATE				
PROJECT NO.	CONTRACT NO.	AREA CODE	SCALE	DRAWING NUMBER	REV.
334488	T-1013A-2	6830	NONE	JS-D-M-5001-101(A)	3