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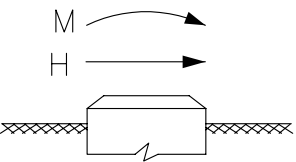
FILE NAME : 6946-00-16-46-3018-0-1

NOZZLES AND CONNECTIONS									
MARK	QTY	NOM DIA.	SCH/ THK.	FLANGES			PROJECTION (NOTE-4)	PAD W X T	SERVICE
				CLASS	TYPE	FACING			
F1	1	100	160	150	WN	RF	SEE DRG.	60X14	FEED
F2	1	50	160	150	WN	RF	SEE DRG.	—	FEED
T	1	38.1 ID	—	150	LWN	RF	SEE DRG.	—	TOP OUTLET
V	1	50	160	150	WN	RF	SEE DRG.	—	VENT+BF
UC1	1	50	160	150	WN	RF	SEE DRG.	—	UTILITY CONNECTION+BF
UC2	1	38.1 ID	—	150	LWN	RF	SEE DRG.	—	UTILITY CONNECTION+BF
LT 1&3	2	200	120	150	WN	RF	SEE DRG.	45X12	LEVEL INSTRUMENTS (WITH 200 NB SCH. 120 STILL WELL)
PI	1	38.1 ID	—	150	LWN	RF	SEE DRG.	—	PRESSURE INSTRUMENTS
TI	1	50	160	150	WN	RF	SEE DRG.	—	TEMPERATURE INSTRUMENTS (WITH 50 NB SCH. 160 STILL WELL)
MH	1	500	12	150	WN	RF	SEE DRG.	130X12	MANHOLE+BF
P	1	700 (HOLD)	14	150	WN	RF	SEE DRG.	200X12 (HOLD)	PUMP NOZZLE
PD	1	40 (HOLD)	← BY PUMP VENDOR →						PUMP DISCHARGE
NP	1	38.1 ID	—	150	LWN	RF	SEE DRG.	—	NITROGEN PURGE
PI1	1	38.1 ID	—	150	LWN	RF	SEE DRG.	—	PRESSURE INDICATION
M1	1	250	60	150	WN	RF	SEE DRG.	80X12	MOUNTING NOZZLE FOR 'UC2' & 'PI'+B.F
M2	1	250	60	150	WN	RF	SEE DRG.	80X12	MOUNTING NOZZLE FOR 'NP' & 'PI1'+B.F

NOTE CONT :-

18. PIPING SPOOL PIECES SHALL BE PROVIDED ABOVE CONNECTIONS MOUNTED ON MANHOLE 'MH' TO ALLOW OPENING OF MANHOLE COVER PROVIDED WITH HINGE.
19. ALL REMOVABLE INTERNALS SHALL BE SIZED SO AS TO PASS THROUGH MANHOLE EASILY.

VESSEL TO BE DELIVERED TO BCPL, LAKWA



FOUNDATION LOADING DATA
(OPERATING CONDITION)

TYPE	MAX. MOMENT AT BASE (M) (Kg _m)		MAX. SHEAR FORCE AT BASE (H) (Kg)	
	DBE	—	DBE	—
SEISMIC	MCE	—	MCE	—
WIND	—		—	

GENERAL NOTES

UNLESS STATED OTHERWISE

- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
- ALL ANCHOR BOLT HOLES TO STRADDLE N/S CENTER LINE.
- NORTH DIRECTION WHEREVER SHOWN IS WITH RESPECT TO PLAN VIEW.
- a) FOR NOZZLES ON SHELL PROJECTIONS ARE REFERRED TO FROM VESSEL CENTER LINE TO FLANGE CONTACT FACE.
- b) FOR NOZZLES ON HEAD PROJECTIONS ARE REFERRED TO FROM HEAD T.L. TO FLANGE CONTACT FACE.
- THE INDICATED THICKNESS IS THE MINIMUM ACCEPTABLE AFTER CONSTRUCTION.
- FLANGE GASKET FACE SHALL HAVE 125 AARH FINISH.
- DIMENSIONS OF FLANGES SHALL BE AS PER ANSI B16.5 UNLESS OTHERWISE STATED.
- ID OF WELD NECK FLANGES SHALL MATCH WITH CORRESPONDING ID OF NOZZLE PIPE/ SHELL.
- ALL NOZZLES SHALL BE STIFFENED WITH 3 NOS. 40X8 THK. STIFFENER EQUISPACED. MANHOLE, MOUNTING NOZZLES OF PUMP SHALL BE STIFFENED WITH 8 NOS. 100X8 THK. STIFFENERS EQUISPACED.
- VESSEL IS SUBJECTED TO STEAM OUT CONDITIONS OF 0.5 KG/CM²(G) @190°C.
- COMPLETE VESSEL SHALL BE STRESS RELIEVED. HARDNESS OF BASE METAL, WELD & HAZ AFTER PWHT SHALL NOT EXCEED 200BHN. HARDNESS MEASUREMENT SHALL BE IN ACCORDANCE WITH 6-12-0002
- ALL CIRCUMFERENTIAL & LONGITUDINAL SEAM INCLUDING NOZZLE NECK TO FLANGE, PIPE TO PIPE & PIPE TO FITTING, SHALL BE FULLY RADIOGRAPHED.
- MANHOLE/NOZZLE NECKS FABRICATED FROM PLATE SHALL BE FULLY RADIOGRAPHED.
- THE VESSEL SHALL BE LOCATED IN A RCC PIT AND SAND PACKED WITH VIBRO COMPRESSION WITH 100 mm. THK. LEAN CONCRETE ON TOP. THE PIT SHALL HAVE MINIMUM CLEARANCE OF 2000 mm. ALL AROUND THE VESSEL AND 1000 mm. (MIN.) FROM BOTTOM OF SUMP OF THE VESSEL (RCC PIT BY OTHERS).
- CATHODIC PROTECTION BY OTHERS, HOWEVER CLIP FOR THE SAME TO SAME TO BE PROVIDED BY VENDOR.
- (a) SIZE OF PUMP & NOZZLE 'P' & 'DP' IS UNDER HOLE AND SHALL BE AS CONFIRMED BY PUMP VANDOR.
- (b) PUMP NOZZLE COVER BLIND FLANGE WITH PUMP ASSEMBLY, PUMP DISCHARGE NOZZLE 'PD', BOLTING AND GASKET SHALL BE SUPLIED BY PUMP SUPPLIER.
- (a) SURFACE PREPARATION :

BLAST CLEANING TO Sa 2-1/2 FINISH OF ISO 8501-1 OR SSPC-SP-10 OR SIS-05-5900 WITH A SURFACE PROFILE OF 35-50 MICRONS OF THROUGH TO PEAK.
- (b) PAINT SYSTEM :
1 COAT OF (F-9) INORGANIC ZINC SILICATE PRIMER @ 65-75 MICRONS DFT/COAT+3 COATS OF HIGH BUILD COAL TAR EPOXY COATING CURED BY POLYAMINE HARDENER (EPIlux 555 FROM M/S. BERGER PAINTS LTD. OR ITS EQUIVALENT APPROVED BY EIL) SUITABLE UP TO CONTINUOUS DRY TEMPERATURE OF 150°C @ 100 MICRONS DFT/COAT. TOTAL DRY FILM THICKNESS (DFT) : = 365 MICRONS MINIMUM.

SPECIFICATIONS

☒	DENOTES APPLICABILITY	
☒	GENERAL SPEC. FOR PRESSURE VESSELS	6-12-0001
☒	SUPP. SPEC. FOR CS VESSELS	6-12-0002
☒	STD. SPEC. FOR BQCS PLATES	6-12-0011
☒	STD. SPEC. FOR STRUCTURAL QUALITY PLATES	6-12-0014
☒	JOB SPEC. FOR SHOP & FIELD PAINTING	6907-0642-PT-L07

STANDARDS

☒	VESSEL TOLERANCES	7-12-0001
	SUPPORT FOR HORIZONTAL VESSEL	7-12-0002
	WOODEN PILLOWS FOR SADDLE SUPPORT	7-12-0003
	SKIRT BASE DETAILS	7-12-0004
	SKIRT OPENING DETAILS	7-12-0005
	ANGLE LEG SUPPORT	7-12-0006
	PIPE LEG SUPPORT	7-12-0007
	BRACKET SUPPORT FOR VERTICAL VESSEL	7-12-0008
☒	MANHOLE WITH HINGED COVER	7-12-0009
	MANHOLE WITH DAVIT	7-12-0010
	LADDER RUNGS FOR MANHOLE/DEMISTER	7-12-0011
	RETAINING PLATE	7-12-0012
☒	NOZZLE REINFORCEMENT AND PROJECTION	7-12-0013
	PAD NOZZLES FOR VESSELS	7-12-0014
☒	STANDARD BOLT HOLE ORIENTATION	7-12-0015
	ALLOY LINER DETAILS	7-12-0016
	SIGHT GLASSES FOR PRESSURE VESSELS	7-12-0017
☒	INTERNAL FLANGES	7-12-0018
	VORTEX BREAKERS	7-12-0019
	INLET DEFLECTOR BAFFLE	7-12-0020
	SUPPORT RING & BOLTING BAR	7-12-0021
	SUPPORT RING SIZES FOR PACKED TOWERS	7-12-0022
	PIPE DAVIT	7-12-0023
	LIFTING LUG TOP HEAD TYPE	7-12-0024
	FIRE PROOFING AND INSULATION SUPPORTS	7-12-0025
☒	EARTHING LUG	7-12-0026
☒	NAME PLATE	7-12-0027
☒	MANUFACTURER NAME PLATE	7-12-0028
☒	BRACKET FOR NAME PLATE	7-12-0029
	NAME PLATE FOR SMALL EQUIPMENT	7-12-0030
	DETAILS OF FORGED NOZZLES	7-12-0031
☒	SUPPORTS FOR INTERNAL FEED PIPE	7-12-0032
	HOT INSULATION SUPPORTS FOR HORIZONTAL VESSEL	7-12-0033
	PIPE DAVIT SUPPORT FOR COLD INS. VESSELS	7-12-0034
	TYP.DETAILS OF WIRE MESH DEMISTER SUPPORTS	7-12-0036
	S.R. NOZZLE NECK	7-12-0037

REFERENCE DRAWINGS

☒	NOZZLE ORIENTATIONS	6907-051-16-43-4104, REV.0
	LADDERS / PLATFORM CLEATS	—
	PIPE SUPPORT CLEATS	—
	TRAY SUPPORT AND BOLTING BARS	—
	DEMISTER DATA SHEET	—

HOLD UPS

☒	NOZZLE ORIENTATIONS	☒ SIZE OF NOZZLES 'P'
	NOZZLE ELEVATIONS	☒ DETAIL OF INTERNAL
	BURIED HEIGHT	LADDER / PLATFORM CLEATS
☒	SIZE & LOCOTION OF CATHODIC PROTECTION CLIP	TRAY SUPPORTS/ BOLTING BARS
		PIPE DAVIT

DESIGN DATA

CODE		ASME SEC. VIII DIV 1(LATEST) + ADDENDA		
WORKING PRESSURE	(Kg/Cm ² g) INT	0.5-0.7	EXT.	
DESIGN PRESSURE	(Kg/Cm ² g) INT	10.5	EXT.	
WORKING TEMPERATURE	(°C)	AMB TO 121		
DESIGN TEMPERATURE	(°C)	140		
MDMT	(°C)	1		
CORROSION ALLOWANCE	(mm)	3.0(INTERNAL), 1.5(EXTERNAL)		
TYPE OF HEADS		TORISPHERICAL		
JOINT EFFICIENCY	SHELL	1.0	HEAD	1.0
RADIOGRAPHY	SHELL	FULL	HEAD	SINGLE PIECE
POST WELD HEAT TREATMENT		YES (COMPLETE VESSEL)		
HEAT TREATMENT		HEAD AS PER SPEC.		
WIND SPECIFICATION		-		
EARTH-QUAKE SPECIFICATION		SITE SPECTRA		
OPERATING MEDIUM	AMINE SOLUTION	SP. GRAVITY- 0.952-1.029		
CAPACITY	(M ³)	7.2		
PAINTING / CLEANING		NOTE-17		
INSULATION THICKNESS (mm) NIL		☐ HOT	☐ COLD	
FIRE PROOFING		☐ YES	☐ NO	
HYDROSTATIC TEST (Kg/Cm ² g)		HORIZONTAL	-VERTICAL-	
PRESSURE (NEW & COLD)		13.65	(AT TOP)	
INSPECTION BY	☒ EIL	☐ CIB	☐ LLOYDS	

MATERIAL OF CONSTRUCTION
(AS PER ASME/IS OR EQUIVALENT)

SHELL	SA 516 GR60
REINFORCEMENT PAD	SA 516 GR.60
HEADS	SA 516 GR.60
SHELL FLANGES	—
NOZZLE FLANGES	SA 105
NOZZLE NECK UPTO 250NB	SA 106 GR.B
NOZZLE NECK ABOVE 250NB	SA 516 GR.60
PIPE FITTINGS	SA 234 GR.WPB
GASKETS EXTERNAL	SPIRAL WOUND GASKET WITH SS 316 METAL
	WINDING AND GRAFOIL FILLER MATERIAL AS PER ASME B16.20
GASKETS INTERNAL	COMPRESSED FIBRE ASBESTOS FREE
EXTERNAL STUDS/BOLTS/NUTS	SA 193 GR.B7/SA 194 GR.2H
INTERNAL STUDS/BOLTS/NUTS	SS 304
SKIRT / SUPPORT	SA 516 GR.60
SKIRT / SUPPORT BASE	—
INTERNAL PARTS (WELDED)	SA 516 GR.60/SA 106 GR.B
INTERNAL PARTS (BOLTED)	SA 516 GR.60/SA 106 GR.B
CLIPS & ATTACHMENTS (EXTERNAL)	SA 516 GR.60
WRAPPER PLATE	SA 516 GR.60
DEMISTER / GRID	—
PAD FOR EXTERNAL ATTACHMENTS	SA 516 GR.60
STIFFENERS	SA 516 GR.60

STATUTORY REGULATIONS

INDIAN BOILER REGULATIONS (IBR)

DEPARTMENT OF EXPLOSIVES, NAGPUR (CCOE)

APPROXIMATE WEIGHT (KGS)

ERECTION WEIGHT	5400	OPERATING WEIGHT (EXCLUDING WEIGHT OF PUMP ASSEMBLY)	9700
HYDROTEST WEIGHT (SHOP)	12600	HYDROTEST WEIGHT (FIELD)(EXCLUDING WEIGHT OF PUMP ASSEMBLY)	12600

NUMBER OF ITEMS : ONE



ENGINEERS INDIA LIMITED
KOLKATA

JOB NO.: 6907

CLIENT: BCPL

PLANT: GSU, LAKWA

0	23.03.2010
A	01.07.2009
REV.	DATE

	ISSUED FOR PURCHASE
	ISSUED FOR BIDS
	REVISION

A.ROY	
A.ROY	
BY	

BVK/PB	
PD/PB	
CHK	

AKG	
AKG	
APPROVED	

APPROVED	

VESSEL DESIGN DATA
AMINE SUMP DRUM
ITEM NO. 051-VV-104

वेसेल डिजाइन ड्रा
एमाइन समप ड्रम
आइटम नम्बर 051-वीवी-104

DRAWING NO.

6907-051-16-46-3018

SHEET 1 OF 3

REV.

0

JOB NO. : 6907
CLIENT : BCPL
PLANT : GAS SWEETENING UNIT

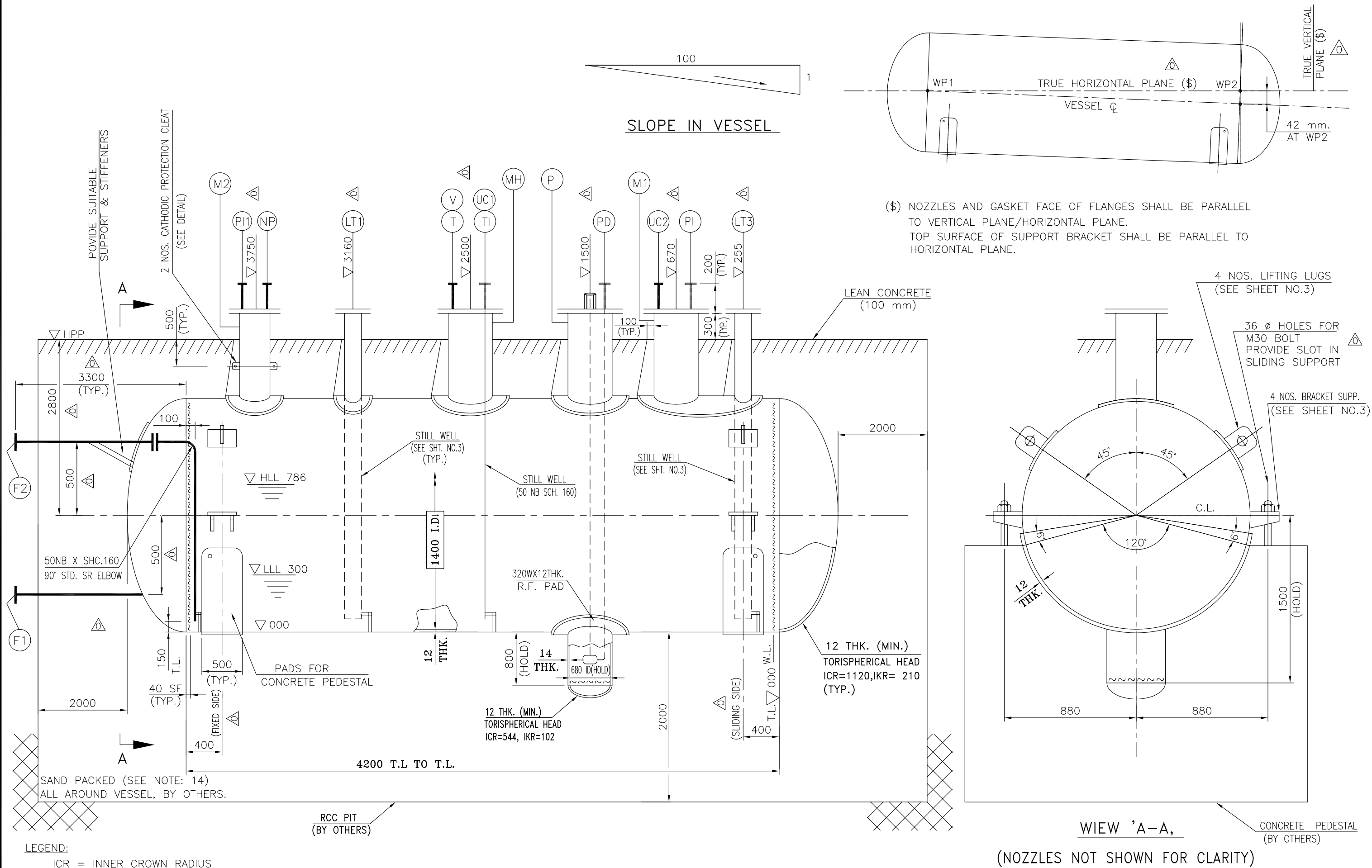
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A	01.07.2009	ISSUED FOR BIDS/ENGG.	A.ROY	RR/PB	AKG	
REV.	DATE	REVISION	BY	CHK	APPROVED	APPROVED

वेसेल डिजाइन डाटा
एमाइन समप ड्रम
आइटम नम्बर 051-वीवी-104

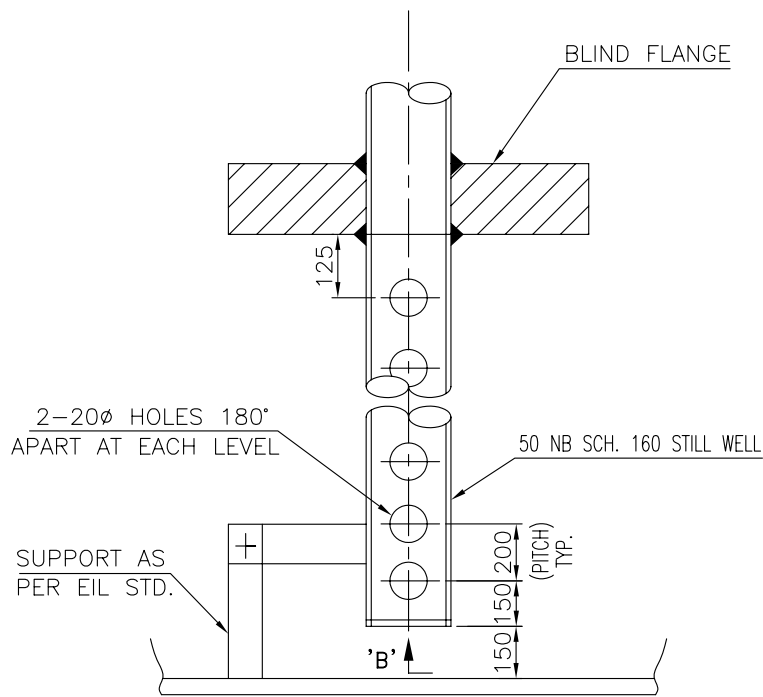
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SHEET 2 OF 3

REV.
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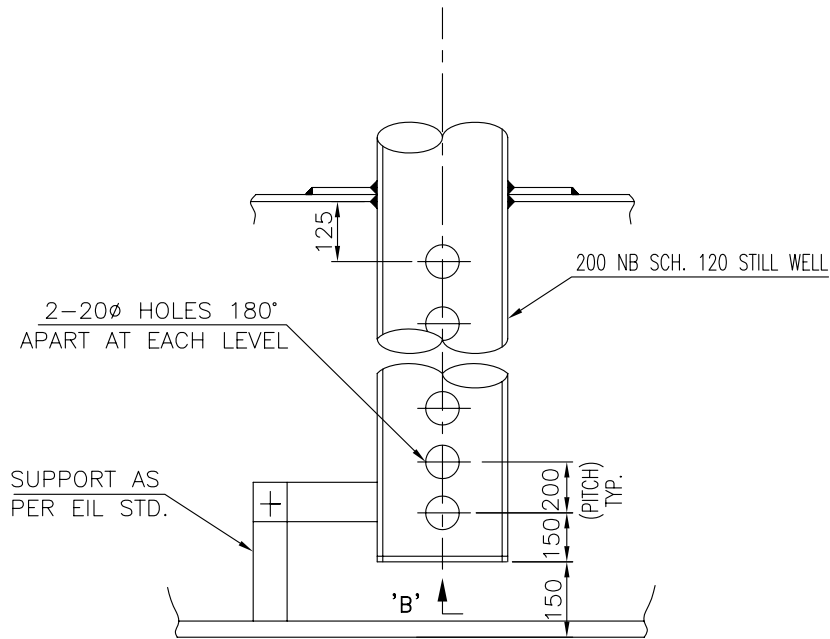
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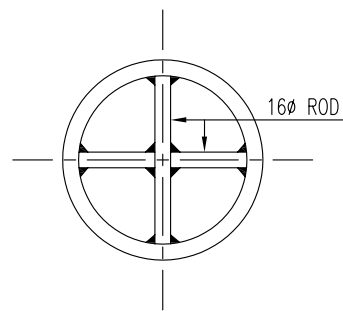
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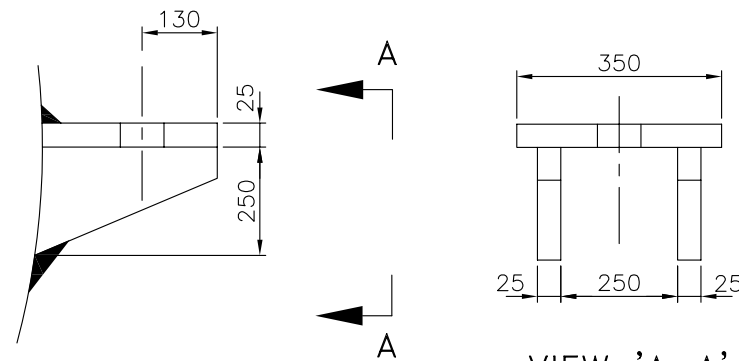
DETAIL OF THE NOZZLE TI



DETAIL OF THE NOZZLE LT1 & LT3

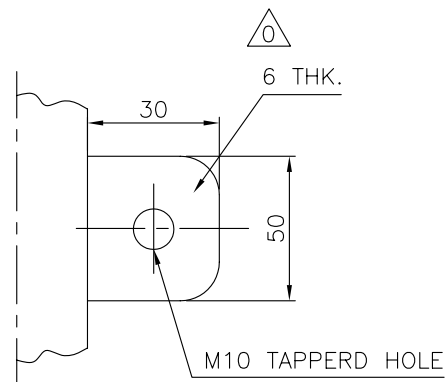


VIEW 'B' (TYP.)

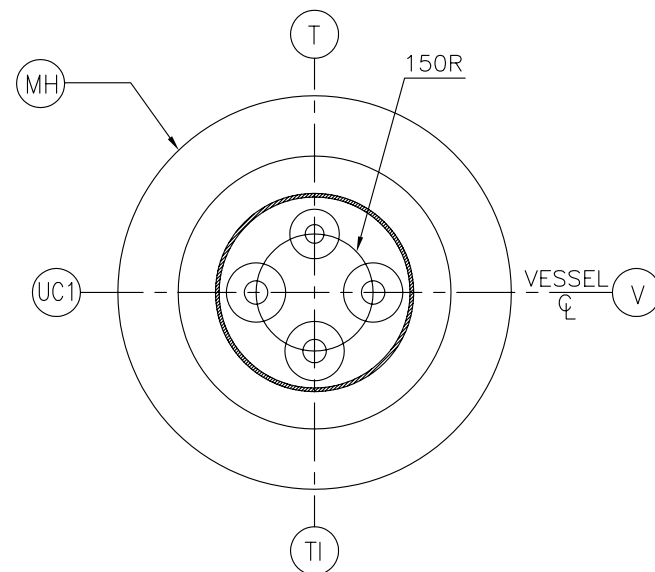


VIEW 'A-A'

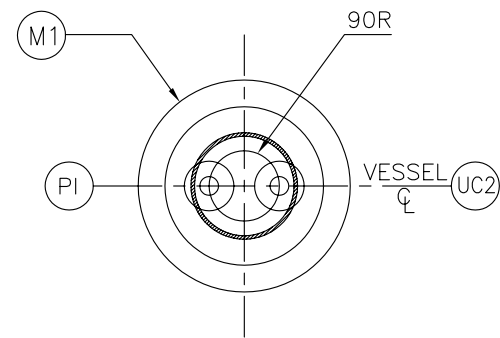
DETAIL OF BRACKET SUPPORT



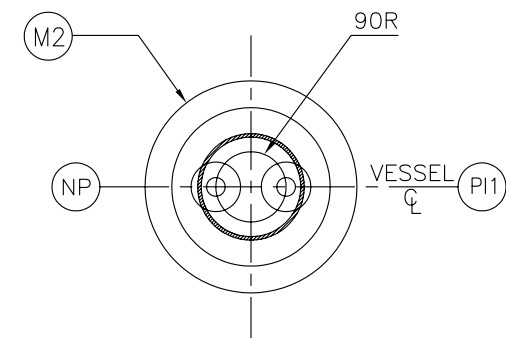
CLEAT FOR CATHODIC PROTECTION (HOLD)



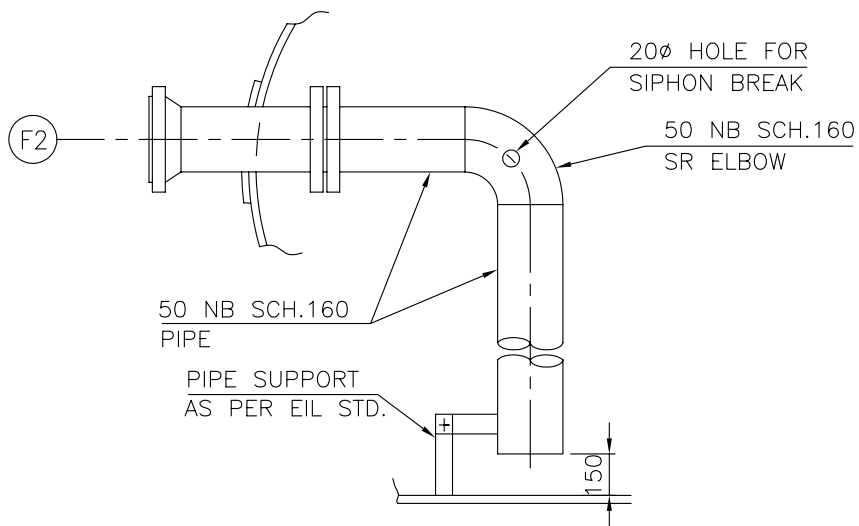
PLAN FOR NOZZLE - MH,UC1,V,T&TI



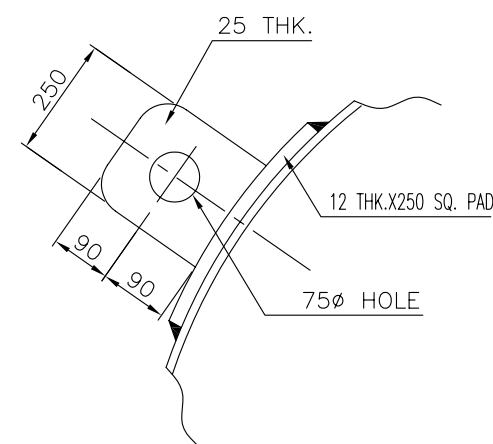
PLAN FOR NOZZLE - M1,UC2&PI



PLAN FOR NOZZLE - M2,NP&PI1



DETAIL OF FEED NOZZLE-'F2'



DETAIL OF LIFTING LUG



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A	01.07.2009	ISSUED FOR BIDS	A.ROY	PD/PB	AKG	

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AMINE SUMP DRUM
ITEM NO.051-VV-104

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आइटम नम्बर 051-वीवी-104

DRAWING NO.
6907-051-16-46-3018

SHEET 3 OF 3

REV.
0