

FOR WEB SITE

pacl

Punjab Alkalies & Chemicals Limited

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CIN : L24119CH1975PLC003607, Website : www.punjabalkalies.com

Rt-00501

Ref No PACL/ENQ/1/kkg/PL-REQ-00501 Date 26/08/2018



Dear Sir,

Kindly Send us your most competitive offers so as to reach us on or before 15-SEP-18 for the supply of the under mentioned items :

15/09/2018

S. Item Code / No Description Of Material	Quantity Unit	
1 PL-015-13016 BISULPHITE PREPRATION TANK	1.000 NO	<p>MOC : FRP (VINYL ESTER DERAKANE MOMENTUM 411-350) TANK VOLUME : 2.0 M3 TECHNICAL SPECIFICATION OF BISULPHITE PREPARATION TANK : SCOPE OF WORK : DESIGN AND FEBRICATION AND SUPPLY OF ABOVE MENTIONED TANK ALONG WITH HOPPER, SPARGERS, RING HEADER, INTERCONNECTING PIPING, SUPPORTS OF LINES/SPARGER INTERNAL / EXTERNAL ATTACHMENTS AS INDICATED IN THE RELEVANT DRAWING NO. 0036-MQ-US-0026 ATTACHED DRAWING FOR MS/RL TANK FOR INDICATION OF DIMENSIONS PURPOSE ONLY .OPERATING, DESIGN AND TEST CONDITION : PROCESS FLUID : 10% NaHSO3 SOLN. IN DM WATER ALONG WITH DENSITY : 1100 KG/M3, DESIGN TEMP. 60 DEG. OPERATING TEMP. 40 DEG. NORMAL VOLUM : 2.0 M3, MAX. FILLING LEVEL IN OPERATION CONDITION 100%, EMPTY WEIGHT, WEIGHT WITH WATER FILLED TO BE QUOTED BY PARTY. GUARANTEE PERIOD WILL BE 12 MONTH FROM DATE OF COMMISSIONING OR 18 MONTH DATE OF RECEIPT OF CONSIGNMENT IN PACL SITE, WHICH EVER IS EARLIER. FINAL TEST AND INSPECTION AFTER FABRICATION. PACKING AND LOADING OF TANK ONTO THE TRANSPORTER'S TRUCK. SUBMISSION OF AS BUILT DRAWINGS. BOLT AND NUTS ARE PART OF SUPPLY FOR MANHOLE AND NOZZLES. MATERIAL TEST CERTIFICATES : PARTY TO BE SUBMITTED MATERIAL TEST CERTIFICATE FOR ALL MAJOR MATERIAL USED FOR FABRICATION. INSPECTION BY PACL.</p>


PROTECTING THE
OPEN ENDS OF THE NOZZLES. GASKET

RFQ Master Enquiry

Terms & Conditions :

Please send your quotation in a sealed envelop mentioning our enquiry Ref.No. strictly on the top of the envelope.

For PUNJAB ALKALIES & CHEMICAL LIMITED


KRISHAN KUMAR GOYAL
DEPUTY MANAGER (PURCHASE)

-
- 1.Quotation received after the due date may not be considered.
 - 2.Exact rates of Sales Tax, Central Sales Tax, Excise duty, Octroi etc. whenever leviable should be clearly specified by you in your quotation, as no subsequent claims will be entertained by us in respect of these, it will not be sufficient to applicable.
 - 3.Any alteration or erasure in the quotation should be absolutely legible & duly attested. Over-writing or over-typing of any information may disqualify your quotation.
 - 4.Our enquiry reference must be indicated clearly on top of the envelope.
 - 5.Your quotation must be for units specified in this enquiry and should be valid for 90 days from date of opening of offer.
 - 6.At our option we may change the quantity of our requirment, or delete items.
 - 7.Please give detailed specification and indicate the name of manufacturer of each item and enclose literature.
 - 8.Your offer should be duly supported by all relevent technical literature/catalogue/brochure etc.
 - 9.Please quote clearly whether your warehouse is covered under excise preview or not. We shall like you to supply material through cenvetable invoice. Next of modvat notes will be compared for commercial evaluation.

IMP: PLEASE INDICATE TARRIF/SUB HEAD UNDER WHICH EXCISE DUTY IS TO BE CHARGED.

TECHNICAL SPECIFICATION FOR ATMOSPHERIC VESSELS

ITEM NO. 07 D01

TON

DRG. NO. 0036-MQ-US-0026

BISULPHITE PREPARATION TANK

This sheet is a record of all revisions to the reference sheets listed in section 2. In case of revision, this record sheet will be re-issued together with the revised sheets. The revision is described in abbreviated form in section 1. However, the complete revision as shown on the reference sheets shall be considered as a firm and integral part of the specification.

1 STATUS OF REVISION

Rev.	Date	Name	Revised page	Revision	Checked	Approved
0	23-11-93	S.PAWAR	-	RELEASED FOR ENQUIRY.	<i>PA</i>	<i>PA</i>
1	28-3-94	S.PAWAR	1,4,5 6,7,9 & 10,11	REVISED FOR ORDER. REVISIONS AS MARKED Δ	<i>PA</i>	<i>PA</i>
2	30-05-94	S.D.D.	1,4,5 7	NOZZLE ORIENTATION INCORPORATED PAGES 11 & 12 ADDED AND REVISIONS AS MARKED Δ	<i>PA</i>	<i>PK</i>
3	26-7-94	PAWAR	1,11	REVISED AS MARKED Δ	<i>PA</i>	<i>PK</i>

MASTER COPY

2 REFERENCE SHEETS

Page	Size	Description	Latest Revision
1	DIN A4	Technical specification	3
2	DIN A4	Index of applicable standards	0
3	DIN A4	Design data sheet	0
4	DIN A4	Sketch	2
5	DIN A4	Nozzle index and orientation.	2
6	DIN A4	General requirements	1
7	DIN A4	HOPPER DETAIL	2
8	DIN A4	SPARGER LAYOUT AND DETAILS OF RUBBERLINING FOR SPARGER PIPES	0
9	DIN A4	DETAILS OF RING HEADER AND INTERCONNECTING PIPING	1
10	DIN A4	DETAILS OF SUPPORT FOR SPARGER	1
11	DIN A4	NOZZLE ORIENTATION	1
12	DIN A4	VESSELS & EQUIPMENT - LOCATION OF SUPPORT CLIPS	0

REV.
3

15-Nov-1993 16:04

DESIGN DATA SHEET FOR ATMOSPHERIC VESSELS-B (CSRL)

BISULPHITE PREPARATION TANK

ITEM NO. 07 D01

TON

ORG. NO. 0036-MQ-US-0026

NOTES

- 1) 70 TO 80 DEG. SHORE D
- 2) VENDOR TO CHECK AND CONFIRM.
- 3) UNC FULL THREADED, CADMIUM PLATED.
- 4) ONLY FINAL INSPECTION BY RUBBERLINING CONTRACTOR.

1	Quantity	Nos	ONE
2	Process fluid		10% NaHSO3 SOLN. IN DM WATER
3			
4	Density	kg/m ³	1100
5	pH-Value		4-11
6	Solid	X liquid	X vol of constituent
7	combustible	explodable	toxic corrosive X
8	Design temperature	°C	60
9	Design pressure	mm WC g	FULL OF LIQUID
10	Operating temperature	°C	40
11	Operating pressure	mm WC g	FULL OF LIQUID
12	Nominal volume	m ³	2.0
13	Effective volume	m ³	-
14	Coefficient of fill	%	-
15	Max. filling rate	m ³ /h	-
16	Max. withdrawal rate	m ³ /h	-
17	Gas evolution rate	m ³ /h	-
18	Breathing gas rate	m ³ /h	-
19	Diameter	mm	
20	Height	mm	Refer sketch
21	Materials (Process side)		REFER LINE 68-91
22	Surface-treatment/	Material	HARD RUBBER
23	-lining/	Thickness	4.5 mm
24	-coating (inside)	Hardness	NOTE 1
25	Corrosion allowance	mm	NIL
26		Shell	NIL
27		Roof	NIL
28		Bottom	NIL
29	Insulation (hot/cold)	mm	NIL
30		Shell	NIL
31		Roof	NIL
32		Bottom	NIL
31	Petroleum classification		N.A.
32	Material for		REFER LINE 77-78
33	Internals		
34	Fill level above	LL mm	-
35	flat bottom	NL mm	-
36		HL mm	-

92	Port	Material	Certificate	Remark	37
91	Bottom center plates	IS 2062 GR. A	YES	-	Remarks (Process Dep.)
90	Bottom annular plates	-	-	-	
89	Shell	IS 2062 GR. A	YES	-	
88	Roof plates	IS 2062 GR. A	YES	-	
87	Roof corner ring	IS 2062 GR. A	YES	-	
86	Roof structure	-	-	-	
85	Flanges	Nazzle	IS 2062 GR. A	YES	
84		inside	-	-	
83	Pipes	Nazzle	SA 106 GR. B	YES	
82		inside	SA 106 GR. B	YES	RUBBERLINED
81	Bolts/	outside	SA 307 GR. B	YES	3)
80	Nuts	inside	REFER PAGE 10	YES	
79	Anchor bolts/nuts	IS 2062 GR. A	YES	-	
78	Internals	welded	IS 2062 GR. A	YES	RUBBERLINED
77		removable	IS 2062 GR. A	YES	RUBBERLINED
76	Shell-/roof-davit	-	-	-	
75	Manhole	Hinge	-	-	
74		Cover	-	-	
73	Clips	Platforms, ladders	IS 2062 GR. A	YES	
72		Insulation	-	-	
71	Supports	IS 2062 GR. A	YES	-	
70	Reinforcements	IS 2062 GR. A	YES	-	
69	Gaskets	outside	SOFT NATURAL RUBBER (6 THK)	55-60 DEG SHORE A	
68		inside	-	-	

67									
66	0	23-11-93	S.PANNR	<input checked="" type="checkbox"/>	RELEASED FOR ENQUIRY.				
65	Rev.	Date	Name	Checked	Description	Rev.	Date	Name	Checked
©.1993 Uhde GmbH					ACAD-NO.: DABRXRXA	92-11			

25-May-1993 16.04

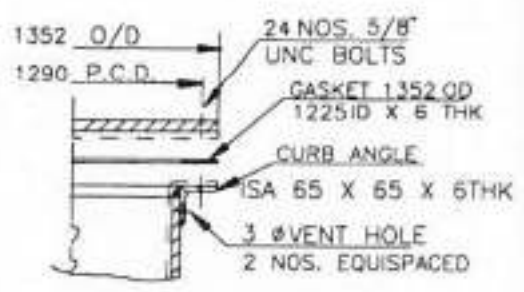
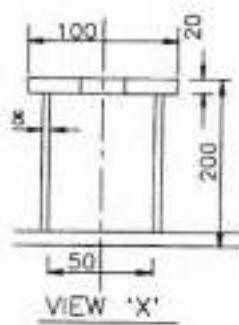
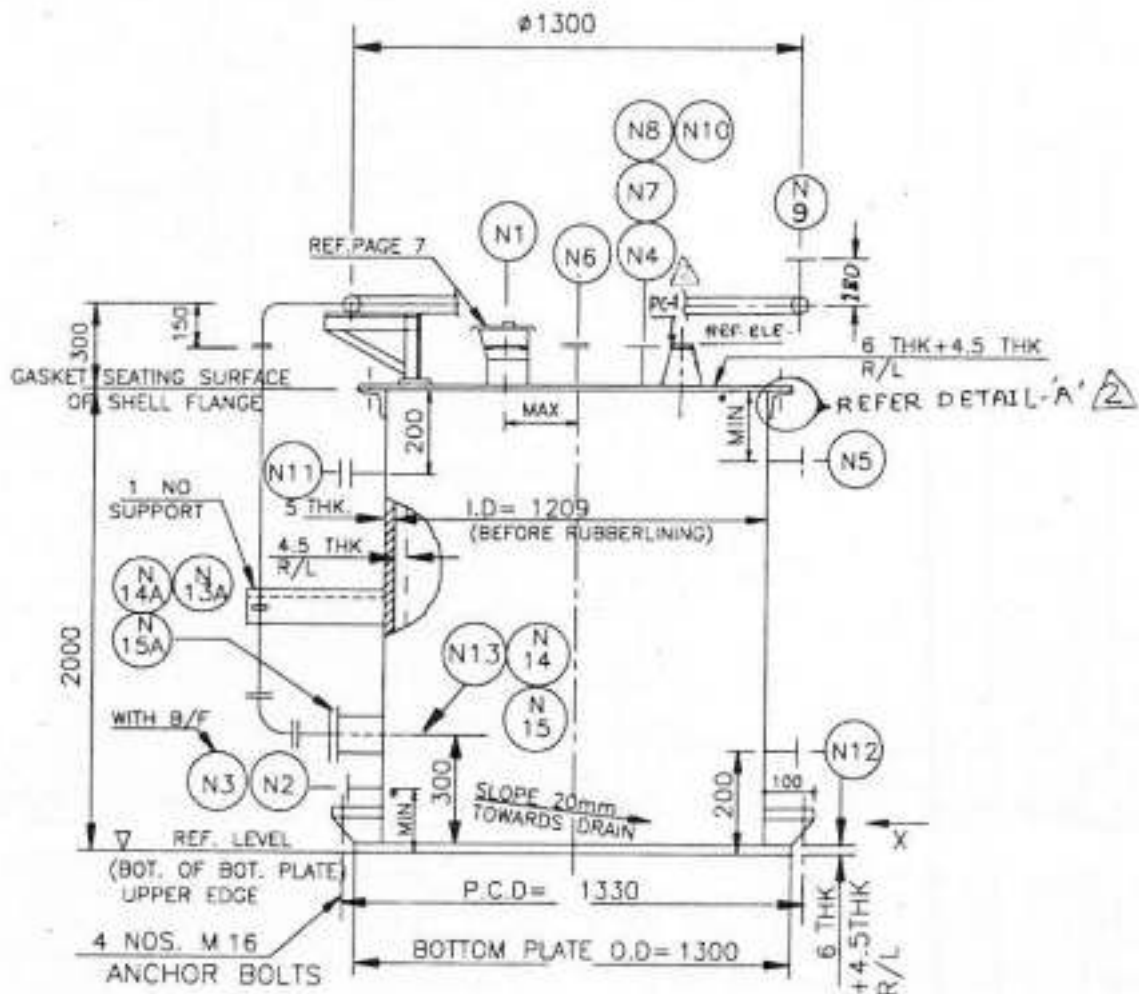
SKETCH

BISULPHITE PREPARATION TANK

ITEM NO. 07 D01

TON

DRG. NO. 0036-WQ-US-0026



DETAIL 'A'

* :- FOR EXACT DIMENSIONS REFER PAGE 5.

28-Mar-1994 11:23

Rev.	Date	Name	Checked	Description	Rev.	Date	Name	Checked	Description
1	28-3-94	S. PAWAR	PA	REVISED FOR ORDER.					
0	23-11-93	S. PAWAR	PA	RELEASED FOR ENQUIRY.	2	30-06-94	S.D.D.	PA	REVISED AS MARKED

NOZZLE INDEX AND ORIENTATION	ITEM NO. 07 D01
BISULPHITE PREPARATION TANK	TON
	DRG. NO. 0036-MQ-US-0026

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Nozzle Symbol	Designation	Size	Rating/Standard/Flange type and Flange facing	Pipe dimensions mm	Nozzle length mm	Dist. from ref. level mm	Orientation on circumference	Notes																															
N1	NaHSO3 INLET	PAGE 7	REFER PAGE 7	PAGE 7	PG 7	PG 7	↑	WITH HOPPER																															
N2	NaHSO3 OUTLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	150	↑																																
N3	DRAIN	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	150	↑	WITH B/P																															
N4	VENT	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	-	2170	↑																																
N5	OVERFLOW	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	1800	↻																																
N6	SPARE WITH BLIND FLANGE	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	-	2170	↻																																
N7	OVERFLOW FROM HEAD TANK	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	-	2170	↻																																
N8	DM WATER INLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	-	2170	↻																																
N9	AIR INLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	-	2170	↻																																
N10	NaOH INLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	-	2170	↻																																
N11	SPARE WITH BLIND FLANGE	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	1800	↻																																
N12	LEVEL SWITCH	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	150	200	↻																																
N13	AIR INLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	910	300	↻																																
N13A	NOZZLE FOR N13	4	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	300	↻	7)																															
N14	AIR INLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	910	300	↻																																
N14A	NOZZLE FOR N14	4	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	300	↻	7)																															
N15	AIR INLET	2	150 #/ANSI B16.5/SOPP 6)	SCH 40	910	300	↻																																
N15A	NOZZLE FOR N15	4	150 #/ANSI B16.5/SOPP 6)	SCH 40	760	300	↻	7)																															
LUG1	LIFTING LUG1 ON SHELL		} CAPACITY = 20KN/LUG			1800	} REFER PAGE 11																																
LUG2	LIFTING LUG2 ON SHELL					1800																																	
LUG3	LIFTING LUG3 ON COVER																																						
LUG4	LIFTING LUG4 ON COVER																																						
NP	Name plate bracket					1100	} REFER PAGE 11																																
EB1	Earthing boss 1		} REFER PAGE 11																																				
EB2	Earthing boss 2																																						

NOTES

- 6. SO FLANGE WITHOUT HUB.
- 7. REDUCING FLANGE TO BE PROVIDED
- 8. PROTECTION/ELEVATION OF NOZZLES SHALL BE MEASURED UP TO STEEL SURFACE OF FLANGES.
- 9. NOZZLE LENGTH FOR NOZZLE N12 TO BE FROM O.D. OF TANK AND FOR OTHER NOZZLES FROM C.E. OF TANK.

* To be filled up by process engineer. Name: _____ Date: _____

1) The above nozzle index shall be reproduced on the manufacturer's drawing.

2) Nozzle length and design to UN 2000-01, part 1, unless otherwise stipulated.

3) Reference level = underside bottom head | underside support | tangent line(TL) | Bot. of bot. plate X (UPPER EDGE)

4) The reference level must be shown on the drawing.

5) Orientation of nozzle on circumference: 0° = north for vertical vessels; 0° = top for horizontal vessels.

Indicate direction of view degrees to be shown for clockwise reading.

62	2.3.94	PAWAR	✓	REVISED AS MARKED					
63	23-11-93	S. PAWAR	✓	RELEASED FOR ENQUIRY.	2	30-05-94	S.D.D.	✓	REVISED AS MARKED
64	Rev. Date	Name	Checked	Description	Rev	Date	Name	Checked	Description

GENERAL REQUIREMENTS-ATMOSPHERIC VESSELS

ITEM NO.	07 D01
TON	
DRG. NO.	0036-HQ-05-0026

BISULPHITE PREPARATION TANK

GENERAL NOTES

- 1> Design shall comply with the specified code.
- 2> Specified wall thicknesses are minimum values and shall be increased, if required by design calculations.
- 3> Nozzle necks shall be atleast 2"NB and shall be reduced to the required nominal size; if this is impossible, necks < 2"NB shall be provided with 2 supporting webs.
- 4> All internals shall be sectionalised for installation and removal through manholes and shall not obstruct free passage through the access openings.

5> Supplies shall include the following items.

Ladder and top hand railing as per GES.	Yes		No	X
Platform as per GES.	Yes		No	X
Supports/clips for insulation as per UN 2000-06 part 1.	Yes		No	X
Additional 2 sets of external gaskets, as spare. (per gasketed joint)	Yes	X	No	
Additional 10 % of bolts & nuts (external), as spare. (per gasketed joint) Min. 2nos.	Yes	X	No	
Additional 2 sets of internal gaskets, as spare. (per gasketed joint)	Yes		No	X
Additional 10 % of bolts & nuts (internal), as spare. (per gasketed joint) Min. 2nos.	Yes	X	No	
Lifting lugs according to UN 2000-07 part 1. Type B Nos. 4	Yes	X	No	
Anchor bolts	Yes		No	X
Earthing connection according to UN 7081-02 part 1. Type B Nos. 2	Yes	X	No	
Name plate bracket.	Yes	X	No	
Foam chambers and other relevant accessories.	Yes		No	X
Strapping of tanks before putting in operation.	Yes		No	X
Lightening arresters and scaffold cable support.	Yes		No	X
4" NS gas tight gauging and sampling device to permit gauging and sampling without venting the gas to the atmosphere.	Yes		No	X
8" NS gauge hatch with non-sparking, self closing cover.	Yes		No	X
Breather valves.	Yes		No	X
All internals, if not otherwise specified.	Yes	X	No	
Rubberlining by fabricator.	Yes		No	X
Manhole hinge to UN 2000-04 /Manhole davit to UR 2000-11 part 1.	Yes		No	X

6> Plates equal to or exceeding 20 mm thk shall be ultrasonically tested on both surfaces and edges. Acceptance standard and acceptance level as per general engineering specification.

7> All forgings greater than or equal to 50 mm thk shall be 100 % Ultrasonically tested. Acceptance standard and acceptance level as per general engineering specification.

8> Testing of the tank shall be carried out as per the specified code.

9> Name plates will be furnished by UIL.

10> Vendor to guarantee completeness of design, fabrication, material and workmanship.

11> Manufacturer has to supply cleats for pipe, platform, ladders and davit etc later, if asked for. ~~Manufacturer will quote price for the same on per kg basis.~~

12> All bolts/nuts shall be cadmium plated.

13> Bottom and roof shall be butt welded when equipment is rubberlined.

14> Equipment to be hydrotested before rubberlining.

15> Vendor shall fabricate the equipment as per UIL specification. Any fabrication drawing prepared by the vendor for his internal purpose will not be reviewed by UIL. Before starting fabrication vendor shall confirm in writing that all thicknesses are adequate for given design conditions.

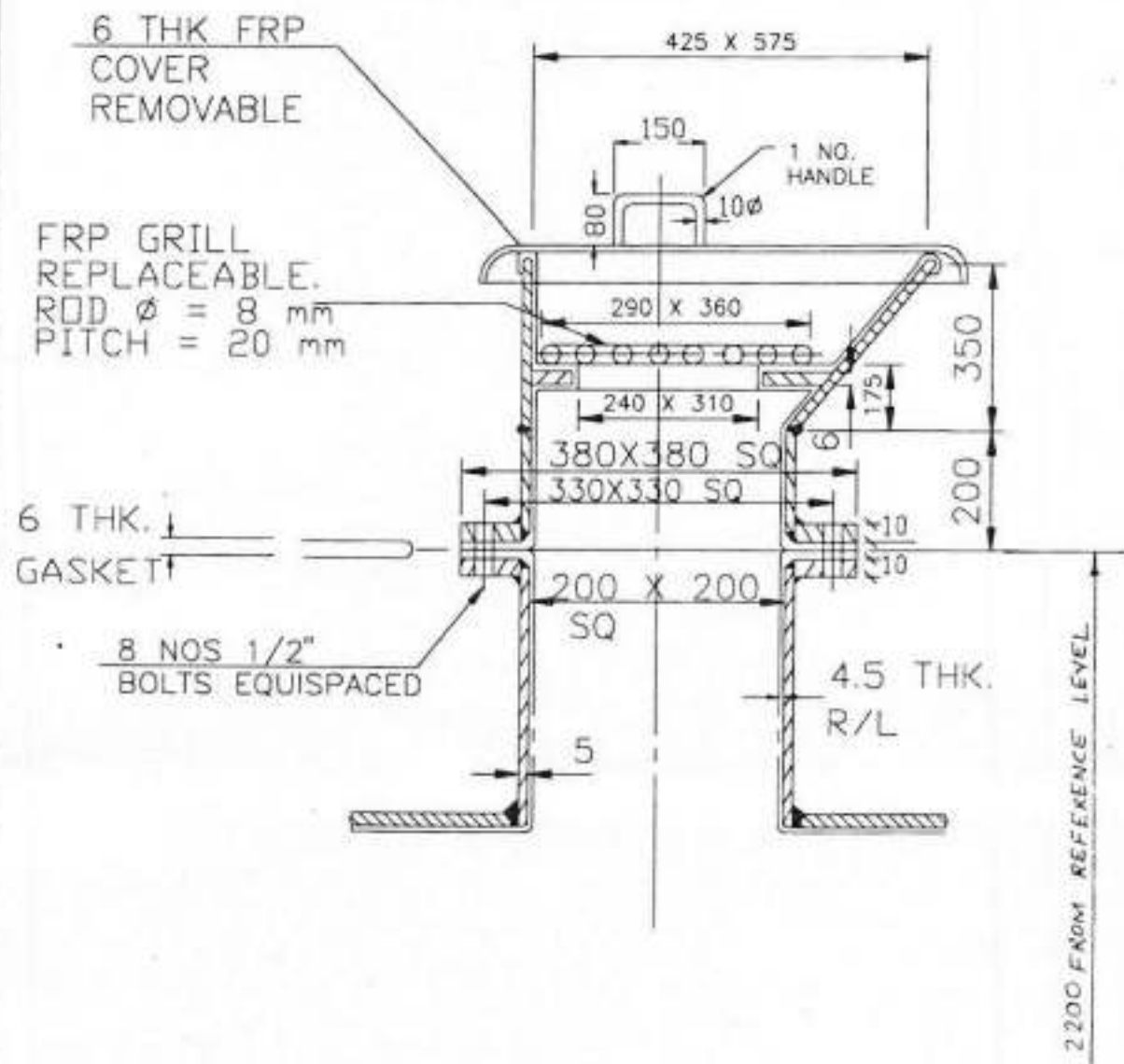
16> Vendor shall incorporate 'As built' dimensions in UIL specification and return the same to UIL before despatch of the equipment.

24 May 1993 15.10

62	1	2-3-94	PAWAR	[Signature]	REVISED AS MARKED				
63	0	23-11-93	S. PAMAR	[Signature]	RELEASED FOR ENQUIRY.				
64	Rev.	Date	Name	Checked	Description	Rev.	Date	Name	Checked

SKETCH	ITEM NO. 07 D01
BISULPHITE PREPARATION TANK	TON
	DRG. NO. 0036-HQ-05-0026

HOPPER DETAIL



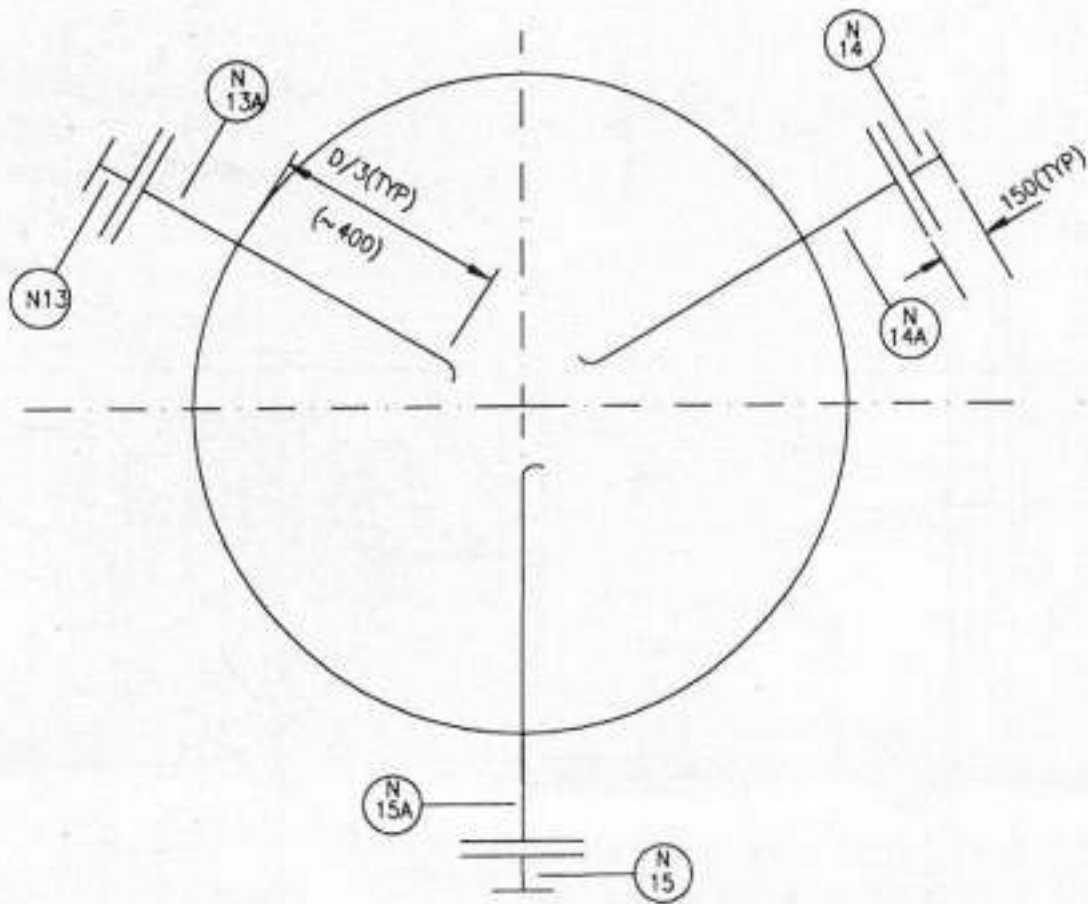
15-Nov-1993 16:19

Rev.	Date	Name	Checked	Description	Rev.	Date	Name	Checked	Description
1	2-3-94	PAWAR	<input checked="" type="checkbox"/>	REVISED AS MARKED					
0	23-11-93	S.PAWAR	<input checked="" type="checkbox"/>	RELEASED FOR ENQUIRY.	2	30-05-94	S.D.D.	<input checked="" type="checkbox"/>	REVISED AS MARKED

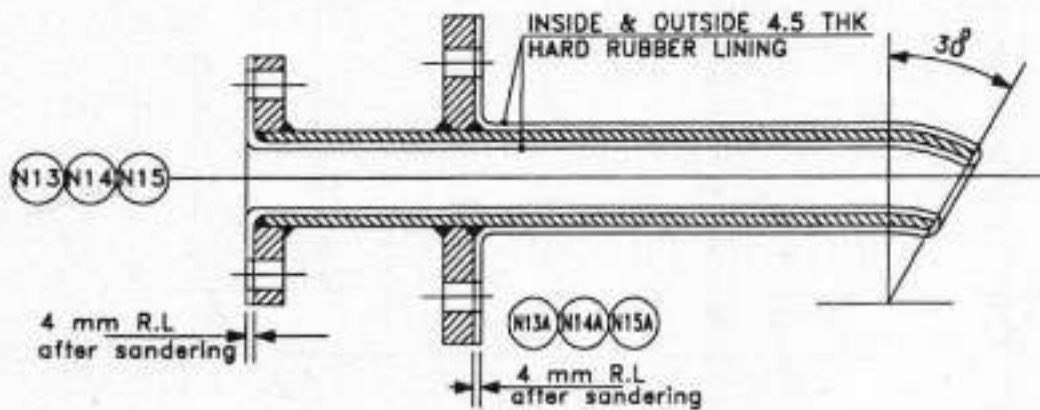
192-06/v = process Description

SKETCH BISULPHITE PREPARATION TANK	ITEM NO.	07 D01
	TON	
	DRG. NO.	0036-MQ-US-0026

SPARGER LAYOUT



DETAILS OF RUBBERLINING FOR SPARGER PIPES



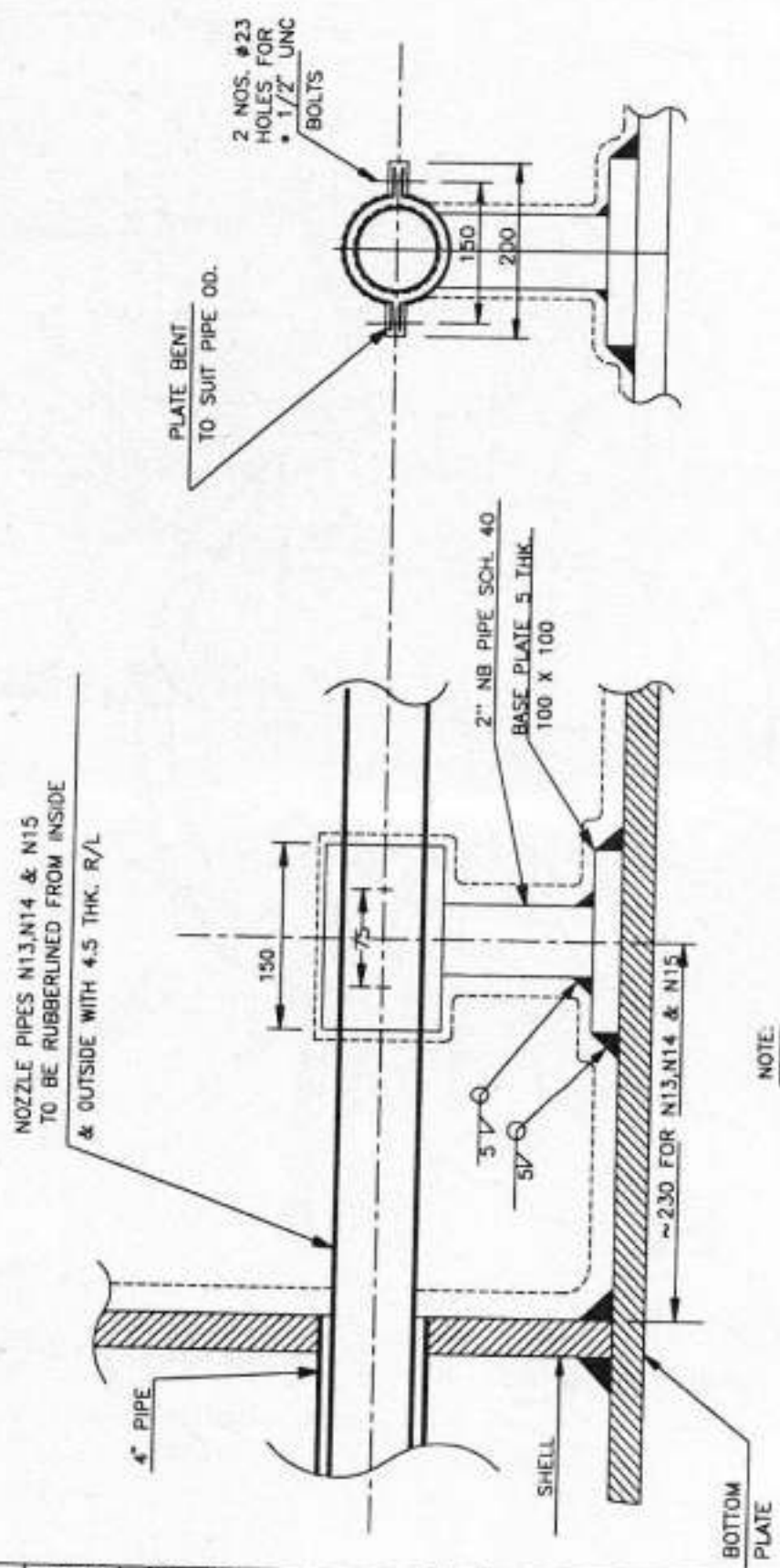
25 May-1993 16:19


0	23-11-93	S. PAWAR	PD	RELEASED FOR ENQUIRY.				
Rev.	Date	Name	Checked	Description	Rev.	Date	Name	Checked
© 1993 Uhde GmbH ACAD-No. 288888A					92-11/V = process, L = line, S = train			

SKETCH
BISULPHITE PREPARATION TANK




ITEM NO.	07 D01
TON	
DRG. NO.	0036-NQ-US-0026

DETAILS OF SUPPORT FOR SPARGER



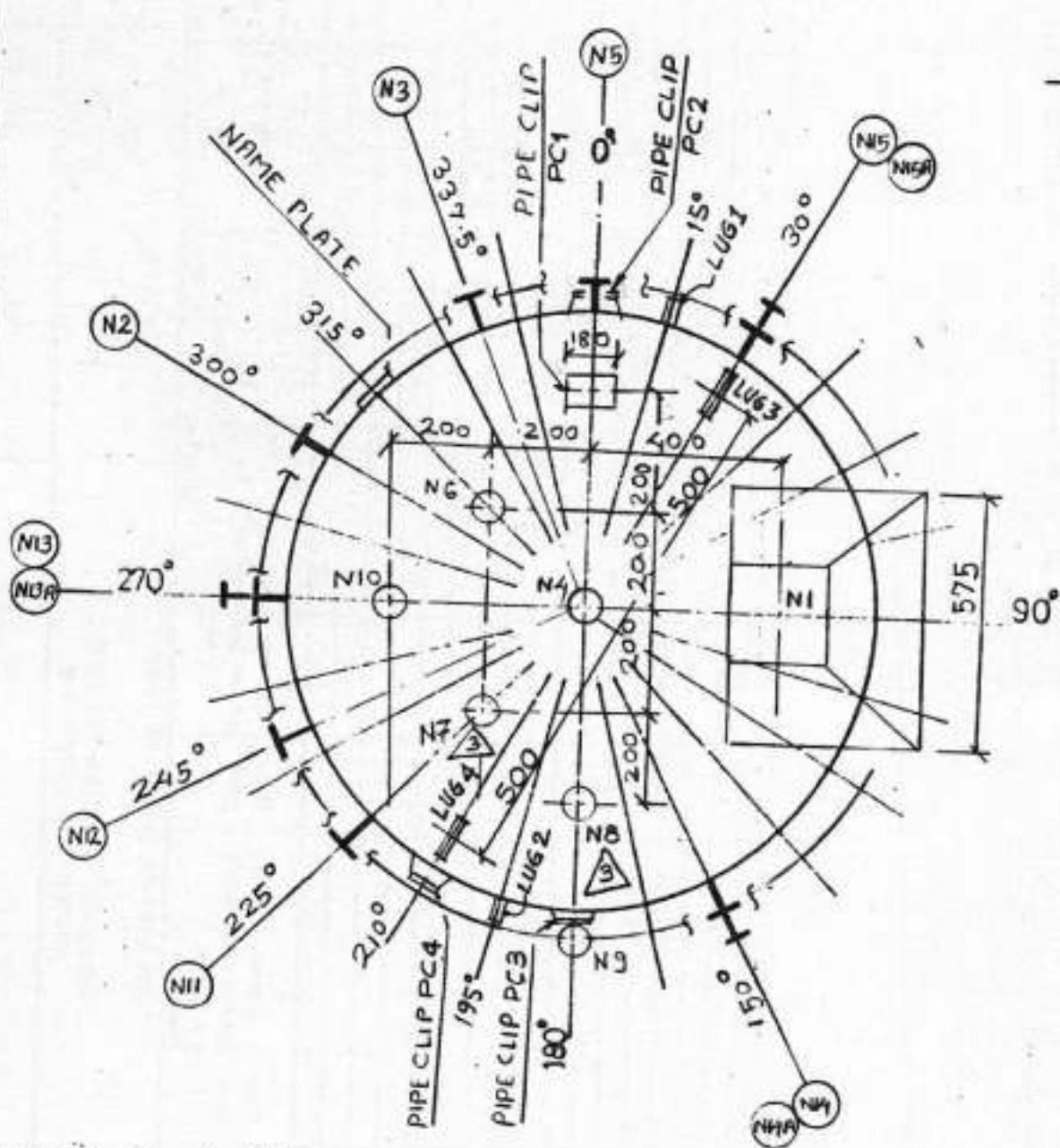
NOTE:
 1) ENTIRE PIPE SUPPORT ASSEMBLY TO BE RUBBERLINED.
 * 2> MOC FOR BOLTS IS  RUBBERLINED CAP TYPE ARRANGEMENT FOR IS 1367 CL 6.8/6 BOLTS/NUTS

25-May-1993 16.119

Rev.	Date	Name	Checked	Description	Rev.	Date	Name	Checked	Description
1	28-3-94	S. PANWAR		REVISED AS MARKED 					
0	23-11-93	S. PANWAR		RELEASED FOR ENQUIRY.					

NOZZLE ORIENTATION

07D01



NOTE : (1) 4 NOS ANCHOR BOLTS @ 90° OFF CENTER
 (2) EARTHING BOSS - 2 NOS @ 45° AND 225° ON ANCHOR STRIPS

H/2315

1	26/7/94	SPG	REVISED AS MARKED					
0	08/02/94	MILN	ORIENTATION ISSUED					
Rev	Date	Name	Checked	Description	Rev	Date	Name	Checked

Vessels and Equipment
LOCATION OF SUPPORT CLIPS

for platforms, ladders, piping etc.

Code PNCL Page 12 UAN 60056700 V 1 L 8

U Item 07001

1)	Platforms clips			Ladder clips 2)			Piping clips			Other clips					
	Design- nation	3) Distance from ref. plane mm	4) Local on circumf.	5) Moment M Nm	1) Design- nation	2) Distance from ref. plane mm	3) Local on circumf.	4) Moment M Nm	1) Design- nation	2) Distance from ref. plane mm	3) Local on circumf.	4) Moment M Nm	5) Design- nation	6) Distance from ref. plane mm	7) Local on circumf.
					PC1	2120	0°	10							
					PC2	800	0°	710							
					PC3	1800	180°	710							
					PC4	1800	210°	710							

* REFER PAGE-11

- Clips according to UN 2000 - DE part 2 and 3 unless otherwise noted
- Erection clips and turnbuckles according to UN 2000 - 07
- REFER TO LEVEL: BOT OF BOT PLT (UPPER EDGE)
- The reference level must be shown on the drawing

- Location of clips on circumference 0° = north for vertical vessels 0° = top for horizontal vessels, indicate direction of view, degrees to be shown for clockwise reading
- For dimensional details see UN 2000 - DE part 2
- Vertical tension of head point 0.5N per clip pair

UNCL (units)

REV 0 DATE 05/01 NAME MUN CRD PC-25/5 h 2315

V = vessels, TON (t) = ton, S = steel, U = Unit, (Items)