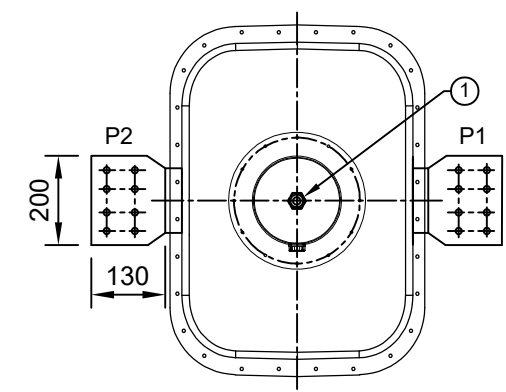
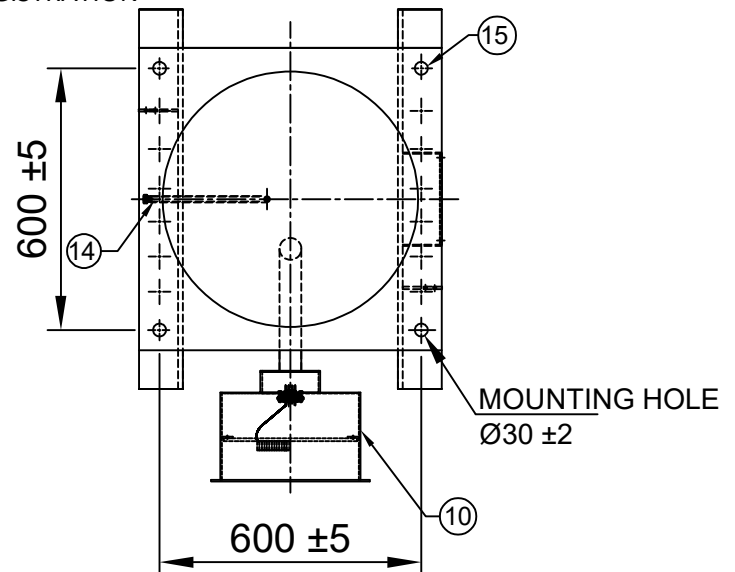


DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

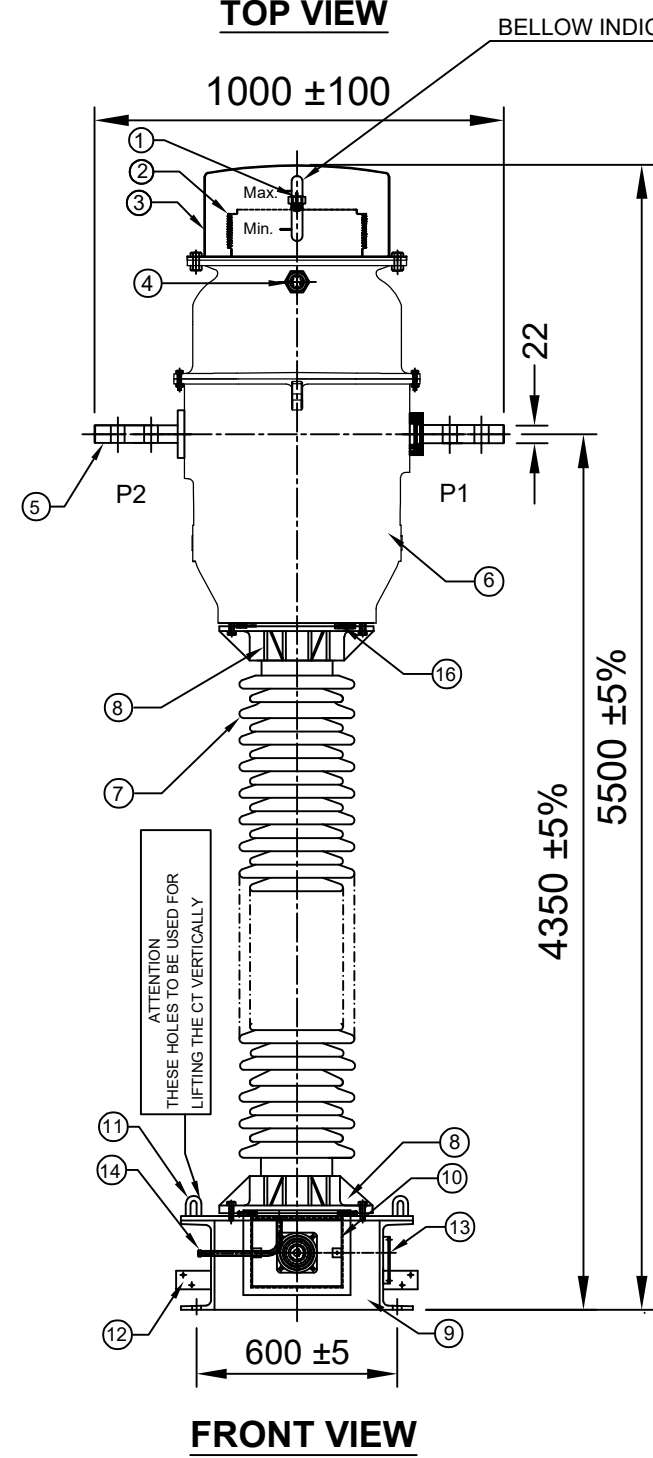


TOP VIEW

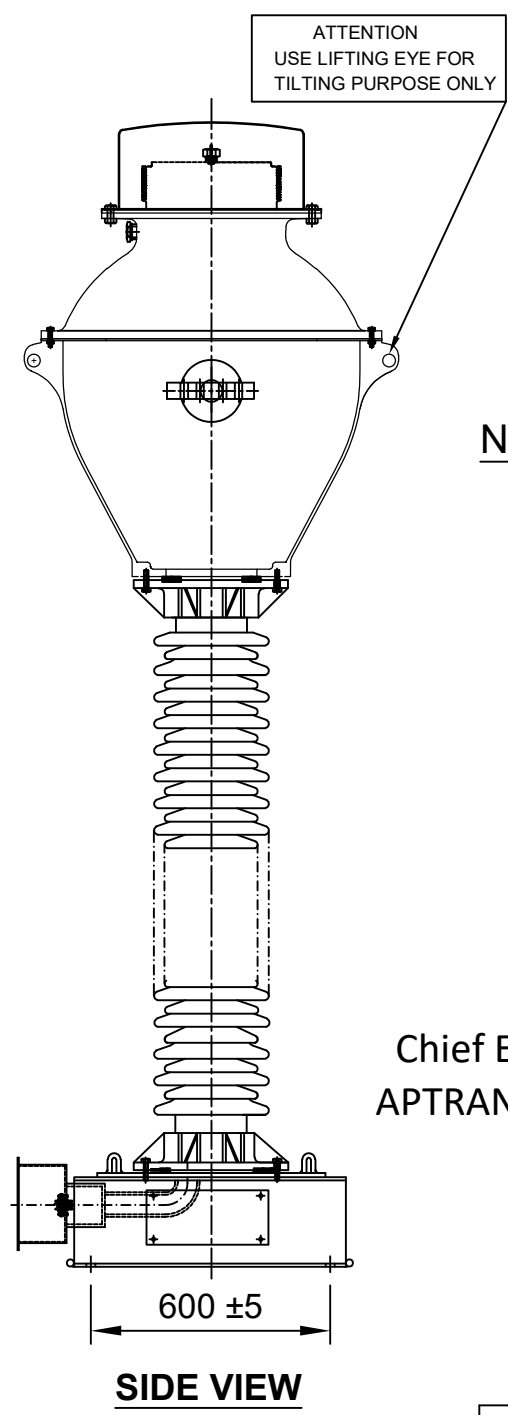


MOUNTING DETAILS

S.No.	DESCRIPTION	QTY	MATL
1	OIL FILLING PORT	1	M.S(HDG)
2	BELLOW	1	S.S
3	BELLOW DOME	1	ALUMINUM
4	OIL LEVEL INDICATOR	1	BRASS/AL.
5	PRIMARY TERMINAL	2	ALUMINUM
6	OIL TANK WITH COVER	1	ALUMINUM
7	BUSHING	1	PORCELAIN
8	BUSHING CLAMP	2	GI/CI
9	BASE	1	M.S(HDG)
10	SECONDARY TERMINAL BOX	1	M.S(HDG)
11	LIFTING HOOK	4	M.S(HDG)
12	EARTHING FLAT 80x50x8 THICK.	2	S.S
13	NAME AND RATING PLATE	1	AL. ANODIZED
14	OIL DRAIN PLUG	1	M.S(HDG)
15	MOUNTING HOLES Ø30 ±2mm	4	M.S(HDG)
16	BUSHING GASKET	2	NBR



FRONT VIEW



SIDE VIEW

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

NOTES:-

1. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE HOT DIP GALVANIZED.
2. MAKE OF BUSHING: IEC/MODERN/BHEL/ABIL.
3. TOTAL CREEPAGE DISTANCE :- 10,500mm (MINIMUM)
4. OIL QUANTITY IN LITRES :- 425 LITRES APPROX.
5. TOTAL WEIGHT OF CT :- 1450 kg. APPROX.
6. PRIMARY WINDING SHALL BE BAR TYPE.
7. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
8. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
9. TRANSFORMER OIL AS PER IEC : 60296.
10. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.
11. CORE/SECONDARY WINDINGS SHALL BE ENCASED IN ALUMINUM SHELL.

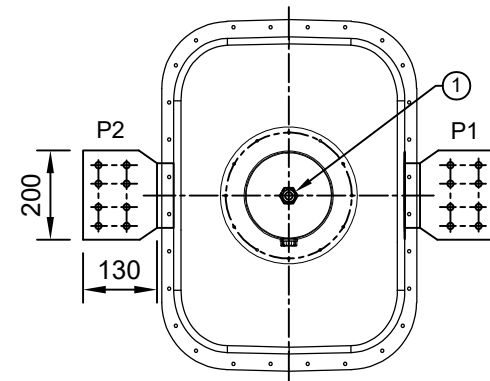
For EPC Contracts Only

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APTRANSCO/VS/Vijayawada.

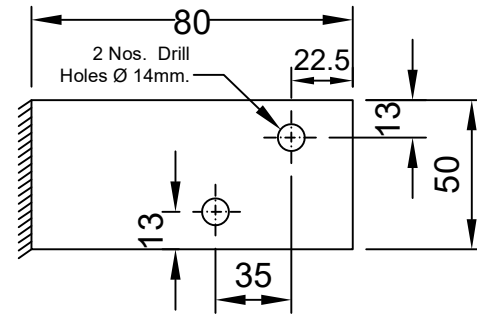
NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS TO BE CHECKED DURING ACCEPTANCE TESTS

R0	FOR APPROVAL	26.02.2024
REV.	REVISION DESCRIPTION	DATED INITIALS

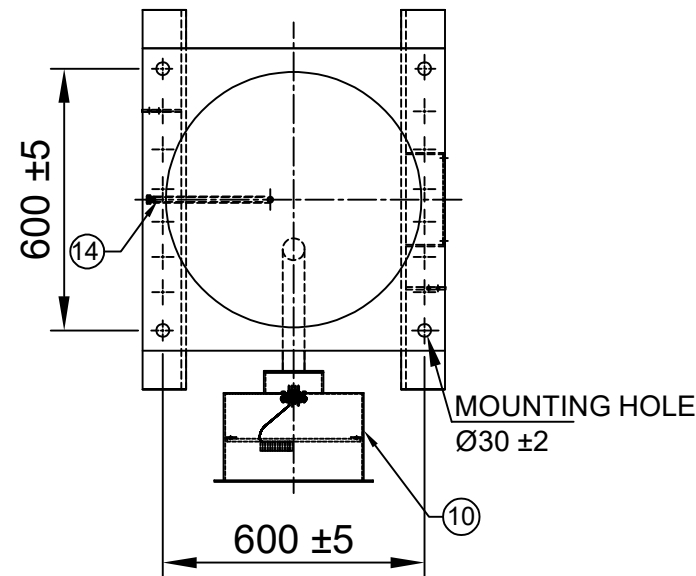
CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				<p>MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.</p>
PROJECT NAME : AS APPLICABLE				
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm.	DGN. 26.02.2024	SPS	SEE TABLE	
2. TOLERANCE WHEREVER NOT INDICATED ±5%	DRN. 26.02.2024	AKASH		
	CHD. 26.02.2024	BLS		
	SCALE: N.T.S			
TITLE :				
GENERAL ARRANGEMENT DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT				
				DRG.NO ME-400CT-GA-01



TOP VIEW

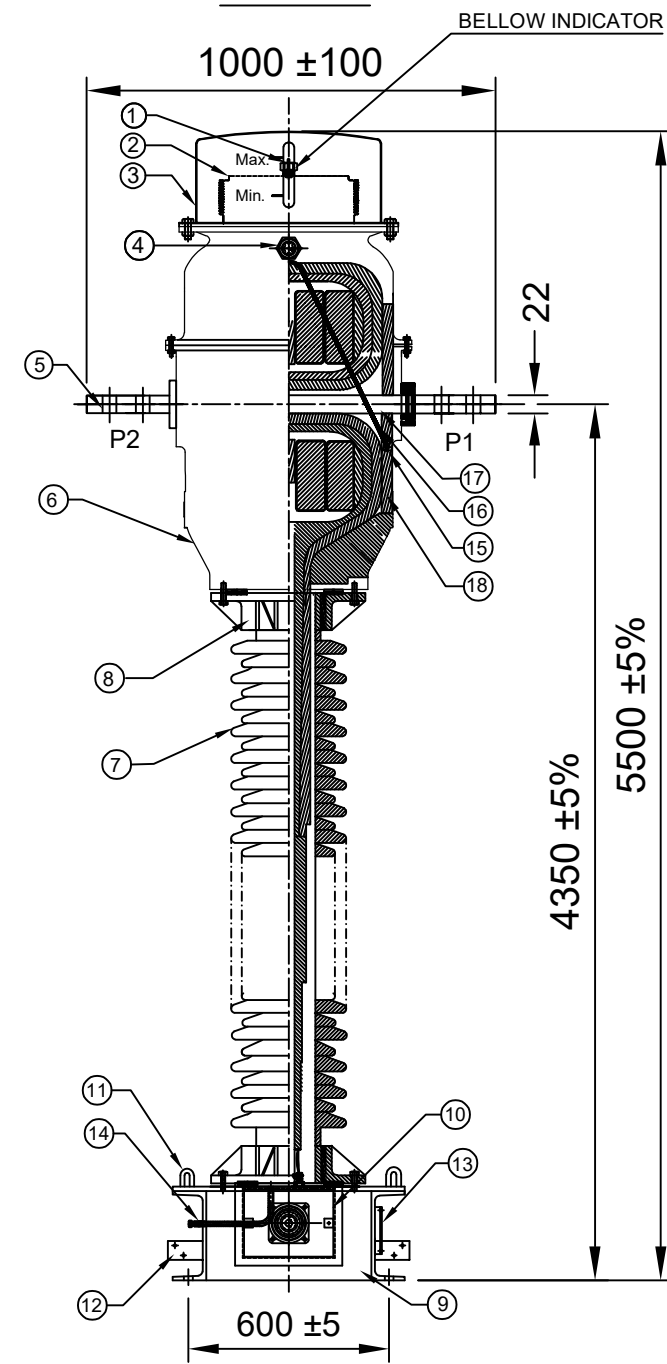


MATL. = S.S
Thickness = 8mm
EARTHING FLAT

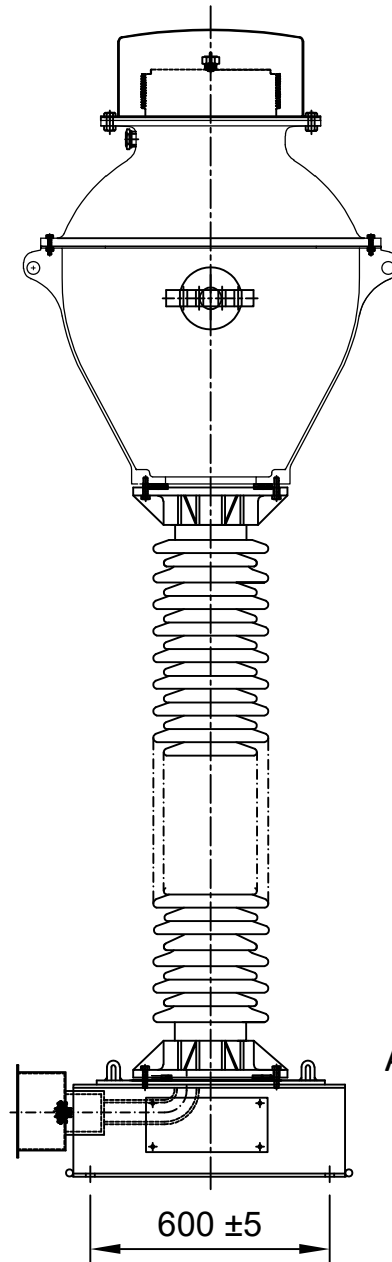


MOUNTING DETAILS

S.No.	DESCRIPTION	QTY	MATL
1	OIL FILLING PORT	1	M.S(HDG)
2	BELLOW	1	S.S
3	BELLOW DOME	1	ALUMINUM
4	OIL LEVEL INDICATOR	1	BRASS/AL.
5	PRIMARY TERMINAL	2	ALUMINUM
6	OIL TANK WITH COVER	1	ALUMINUM
7	BUSHING	1	PORCELAIN
8	BUSHING CLAMP	2	GI/CI
9	BASE	1	M.S(HDG)
10	SECONDARY TERMINAL BOX	1	M.S(HDG)
11	LIFTING HOOK	4	M.S(HDG)
12	EARTHING FLAT 80x50x8 THICK.	2	S.S
13	NAME AND RATING PLATE	1	AL. ANODIZED
14	OIL DRAIN PLUG	1	M.S(HDG)
15	HOOK FOR COIL TIGHTENING	4	M.S(HDG)
16	COIL TIEING STRING	--	NYLON
17	PRIMARY WINDING	--	ALUMINUM
18	PRESS BOARD	--	BAKELITE



FRONT VIEW



SIDE VIEW

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

NOTES:-

1. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE HOT DIP GALVANIZED.
2. MAKE OF BUSHING: IEC/MODERN/BHEL/ABIL.
3. TOTAL CREEPAGE DISTANCE :- 10,500mm (MINIMUM)
4. OIL QUANTITY IN LITRES :- 425 LITRES APPROX.
5. TOTAL WEIGHT OF CT :- 1450 kg. APPROX.
6. PRIMARY WINDING SHALL BE BAR TYPE.
7. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
8. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
9. TRANSFORMER OIL AS PER IEC : 60296.
10. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.
11. CORE/SECONDARY WINDINGS SHALL BE ENCASED IN ALUMINUM SHELL.


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DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE			
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	26.02.2024	SPS
	DRN.	26.02.2024	AKASH
	CHD.	26.02.2024	BLS
	SCALE:	N.T.S	
TITLE :			SEE TABLE
SECTIONAL ARRANGEMENT DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT			
			 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.



LIVE TANK CURRENT TRANSFORMER
MADE TO IS: 16227

HIGHEST SYSTEM VOLTAGE	420 kV	INSULATION LEVEL				630/1425 kV
RATED S.T.C	63 kA for 1 second	RATED FREQUENCY				50 Hz
NOMINAL SYSTEM VOLTAGE	400 kV	CORE 1	CORE 2	CORE 3	CORE 4	CORE 5
RATIO	PRIMARY(Amp)	500-1000-2000-3000	500-1000-2000-3000	500-1000-2000-3000	500-1000-2000-3000	500-1000-2000-3000
	SECONDARY(Amp)	1	1	1	1	1
SECONDARY TERMINALS		1S1-1S2-1S3-1S4-1S5	2S1-2S2-2S3-2S4-2S5	3S1-3S2-3S3-3S4-3S5	4S1-4S2-4S3-4S4-4S5	5S1-5S2-5S3-5S4-5S5
RATED BURDEN IN V.A		----	----	20 VA	----	----
ACCURACY CLASS		PX	PX	0.2S	PX	PX
ALF / ISF		----	----	<5	----	----
Min Knee point voltage		500/1000/2000/3000 V	500/1000/2000/3000 V	----	500/1000/2000/3000 V	500/1000/2000/3000 V
Max Rct AT 75 DEG C		<2.5/5.0/10/15 Ohms	<2.5/5.0/10/15 Ohms	----	<2.5/5.0/10/15 Ohms	<2.5/5.0/10/15 Ohms
Max Iext at Vk		120/60/30/20 mA	120/60/30/20 mA	----	120/60/30/20 mA	120/60/30/20 mA
YEAR OF MANUFACTURE	2024	SERIAL NO.				

RATED CONTINUOUS THERMAL CURRENT 120% OF 3000A, 180% OF 2000A, 200% OF 1000A & 200% OF 500A

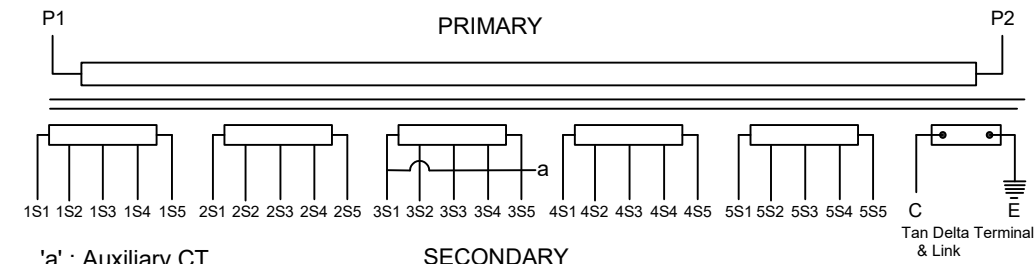
TOTAL WEIGHT OF CT :- 1450 kg. (APPROX.), QUANTITY OF OIL :- 425 LITRES (APPROX.) TOTAL CREEPAGE DISTANCE :- 10,500 mm (MINIMUM.)

MADE IN INDIA BY :

MEHRU ELECTRICAL AND MECHANICAL ENGINEERS (P) LTD.

SP-2/180, RIICO INDUSTRIAL AREA, KEHRANI, BHIWADI-301019, RAJASTHAN (INDIA)

SUITABLE FOR HOT LINE WASHING
CONNECTION DIAGRAM



FOR RATIO	PRIMARY CONNECTION	SECONDARY CONNECTION				
		CORE 1	CORE 2	CORE 3	CORE 4	CORE 5
500/1A	P1 - P2	1S1-1S2	2S1-2S2	3S1-3S2 Short 3S2-a	4S1-4S2	5S1-5S2
1000/1A	P1 - P2	1S1-1S3	2S1-2S3	3S1-3S3 Short 3S3-a	4S1-4S3	5S1-5S3
2000/1A	P1 - P2	1S1-1S4	2S1-2S4	3S1-3S4 Short 3S4-a	4S1-4S4	5S1-5S4
3000/1A	P1 - P2	1S1-1S5	2S1-2S5	3S1-3S5 Short 3S5-a	4S1-4S5	5S1-5S5

CAUTION

- I. SHORT CIRCUIT AND EARTH ALL SECONDARY TERMINALS WHICH ARE NOT IN USE.
- II. ALWAYS KEEP TAN DELTA TESTING TERMINAL 'C' SHORTED TO EARTH DURING OPERATION.
- III. DO NOT REMOVE EARTH LINK WHEN IN OPERATION.

265 ±20

115 ±15

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

NOTES :

1. MATERIAL OF NAME PLATE : ALUMINUM ANODIZED.
2. THICKNESS OF NAME PLATE : 1.2 mm.
3. SERIAL NO. SHALL BE ENGRAVED BEFORE DISPATCH.

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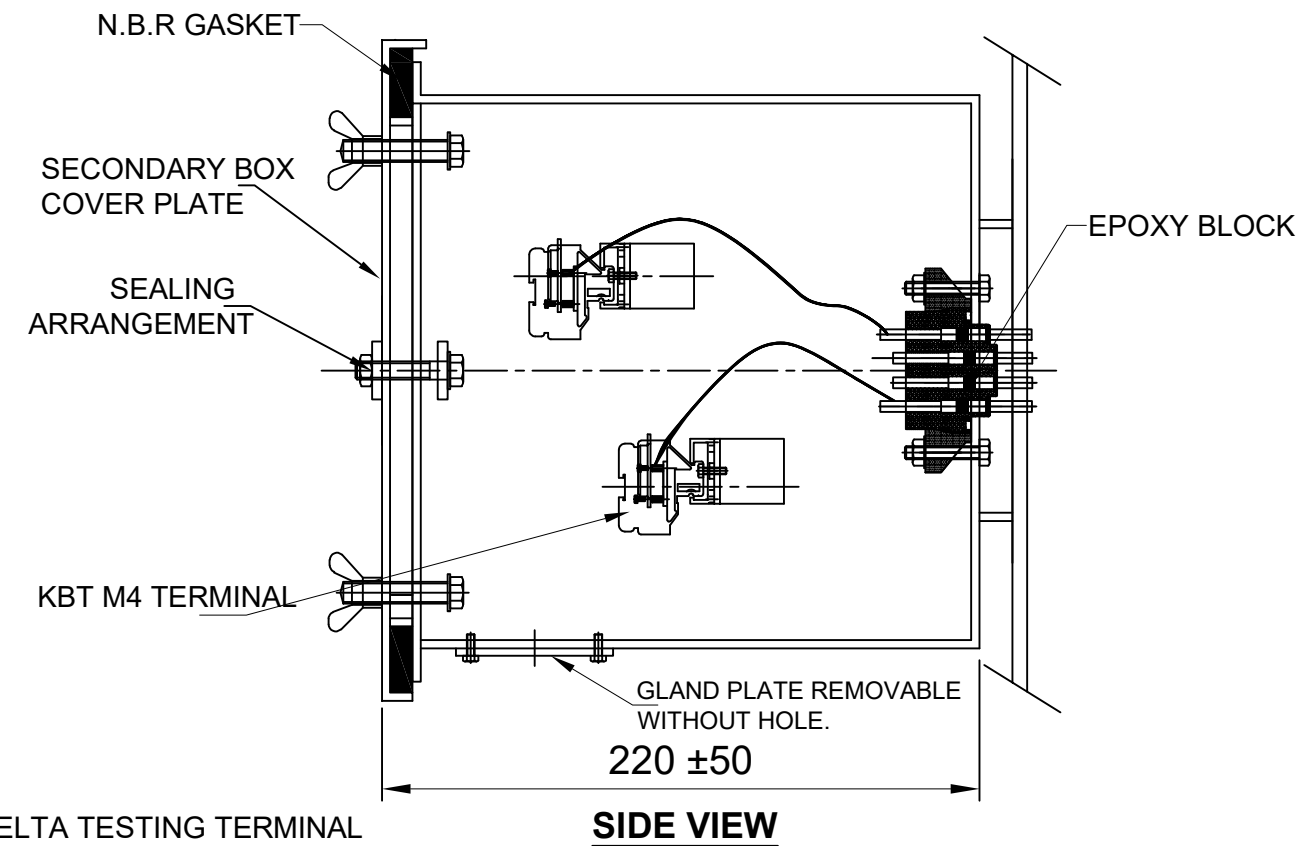
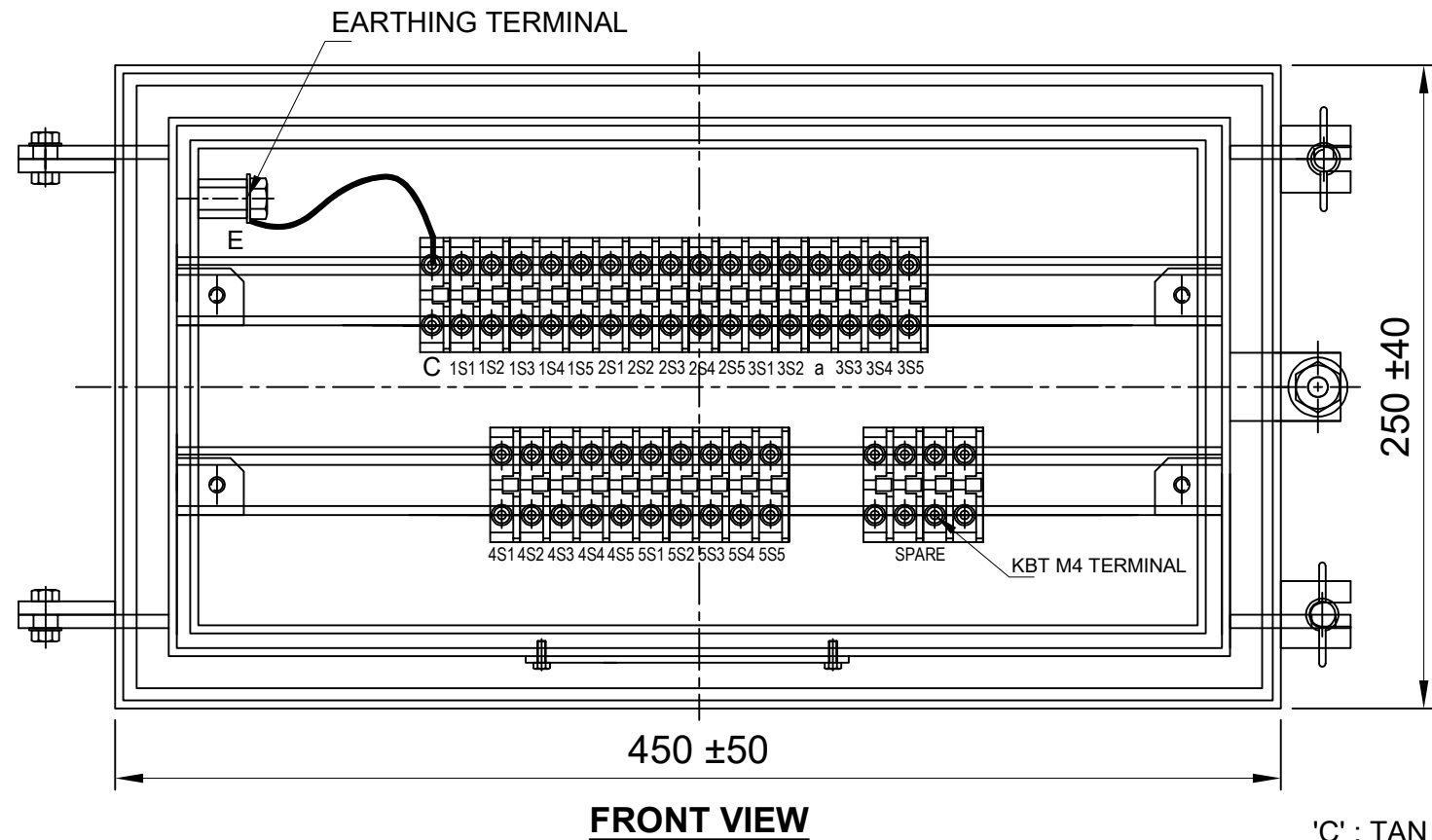
DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : ±5%

NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

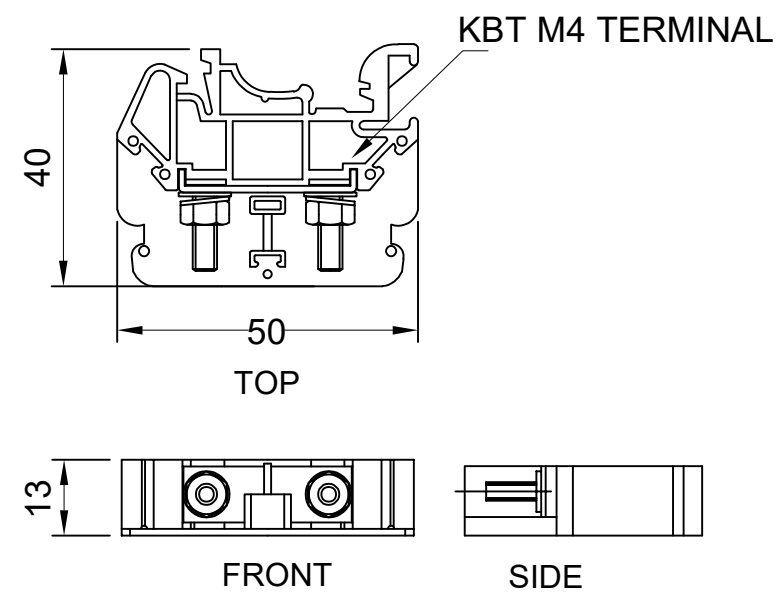
REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				PROJECT NAME : AS APPLICABLE	
UNLESS OTHERWISE SPECIFIED 1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	26.02.2024	SPS	MATERIAL AL. ANODIZED	 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
	DRN.	26.02.2024	AKASH		
	CHD.	26.02.2024	BLS		
	SCALE:	N.T.S			
TITLE :					
NAME PLATE DRAWING FOR 400kV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT				DRG.NO ME-400CT-NP-01	



'C' : TAN DELTA TESTING TERMINAL
'E' : EARTHING TERMINAL
'a' : Auxiliary CT

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained



MATERIAL: POLYAMIDE
MAKE: ELMEX
TERMINAL (DETAIL)

NOTES :-

1. SECONDARY TERMINAL BOX SHALL BE PROVIDED REMOVABLE GLAND PLATE WITHOUT HOLE.
2. SECONDARY TERMINAL BOX SHALL BE PROVIDED WITH COVER.
3. SHEET THICKNESS FOR TERMINAL BOX SHALL BE 3.0mm. & FOR COVER 2.0 mm.
4. MATERIAL OF GASKET : NITRILE BUTYL RUBBER GASKET.
5. DEGREE OF PROTECTION : IP 55
6. 20% SPARE TERMINAL SHALL BE PROVIDED.

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DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

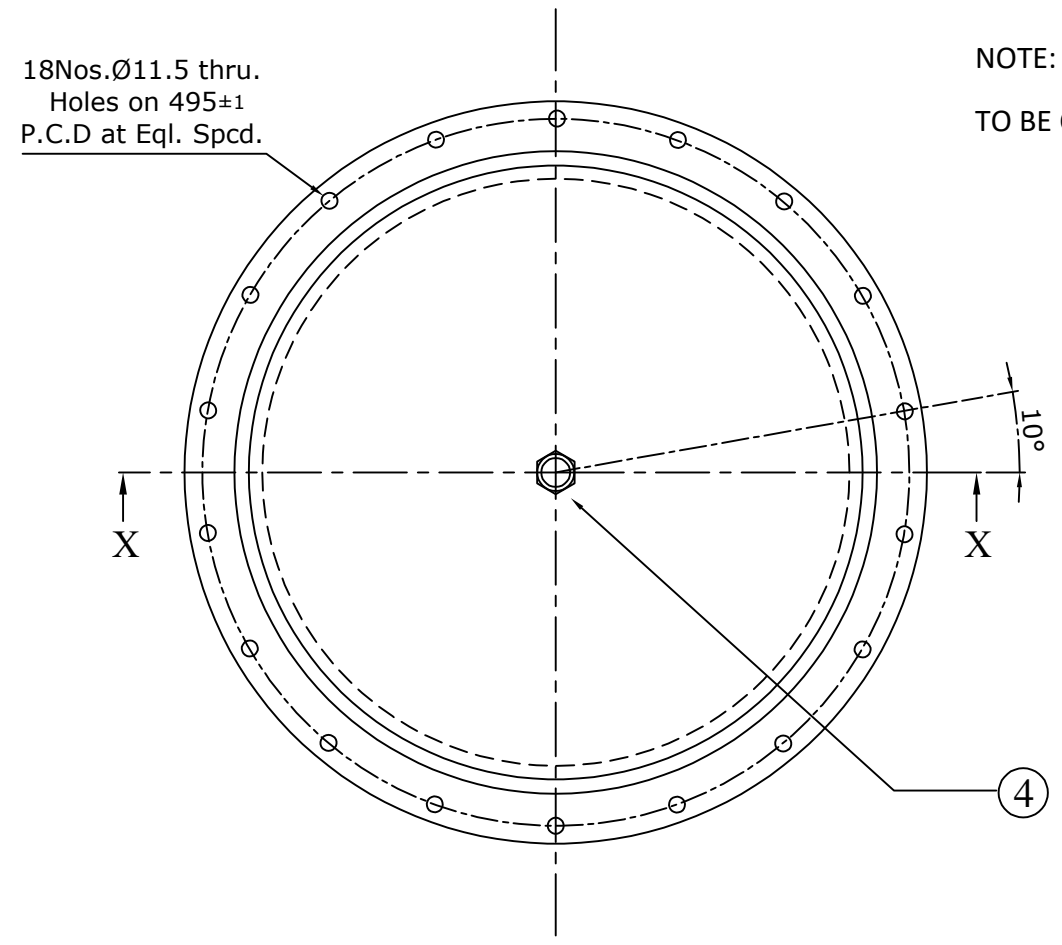
1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : ±5%

NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

R0	FOR APPROVAL	26.02.2024
REV.	REVISION DESCRIPTION	DATED INITIALS

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				<p>MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.</p>
PROJECT NAME : AS APPLICABLE				
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN. 26.02.2024 DRN. 26.02.2024 CHD. 26.02.2024 SCALE: N.T.S	SPS AKASH BLS	M.S(HDG)	
TITLE : SECONDARY TERMINAL BOX DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT				



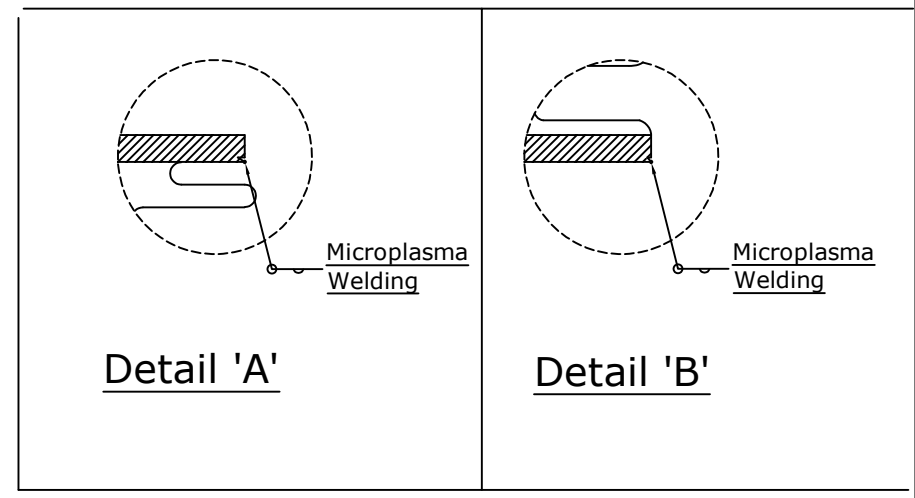
NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

BELLOW MANUFACTURING DETAIL:

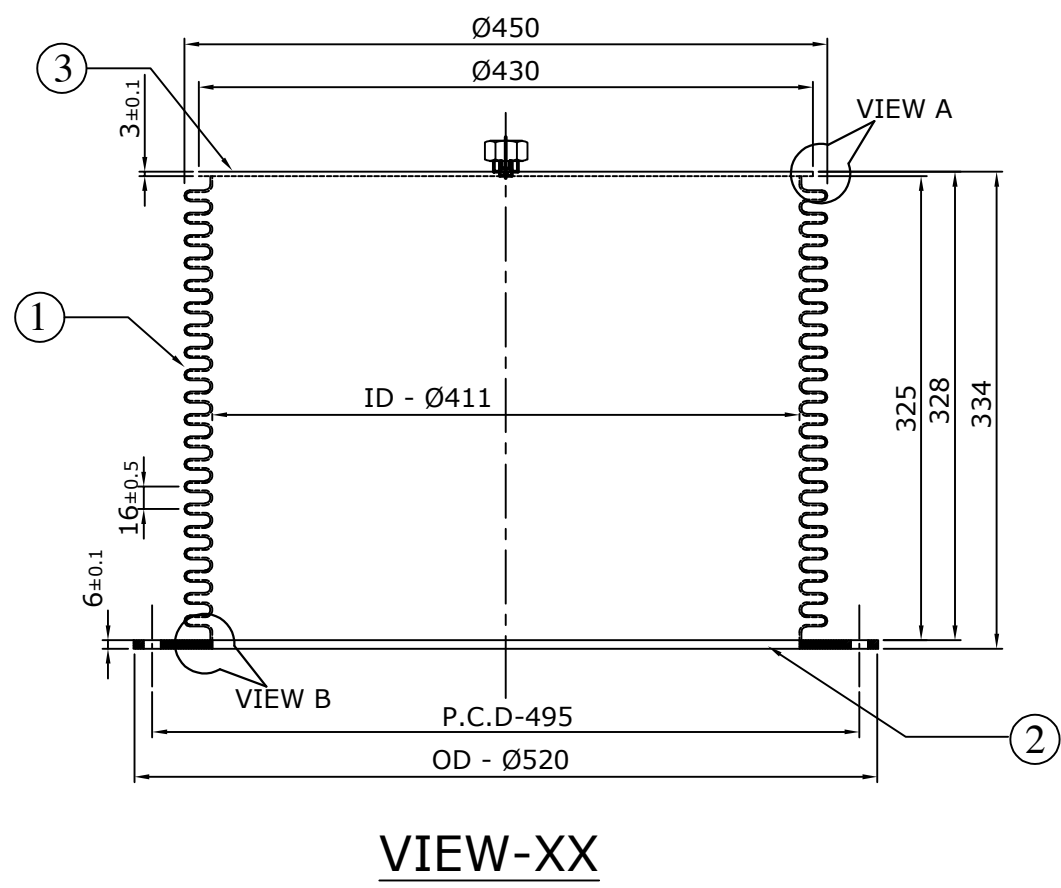
1. BELLOW I.D : $\varnothing 411 \pm 2$ mm
2. BELLOW O.D : $\varnothing 450 \begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$ mm
3. PITCH : 16 ± 0.5 mm
4. BELLOW THICKNESS : 0.3mm.x 1Ply.
5. NO. OF CONVOLUTIONS : (20+1 Half)x1
6. AIR UNDER WATER TEST : 1 BAR

BELLOW DESIGN DETAIL:

- AXIAL MOVEMENT : 147 mm (EXPANSION)
- AXIAL MOVEMENT : 130 mm (COMPRESSION)
- OPERATING PRESSURE : 1 BAR
- OPERATING TEMPERATURE : 100°C



04	OIL FILLING PORT	M.S(HDG)	1
03	TOP PLATE	M.S(HDG)	1
02	BOTTOM PLATE	M.S(HDG)	1
01	BELLOWS	AISI 304	1
PART No.	DESIGNATION	MATERIAL	QTY.



Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

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DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : $\pm 5\%$

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
PROJECT NAME : AS APPLICABLE

UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED $\pm 5\%$	DGN.	26.02.2024	SPS
	DRN.	26.02.2024	AKASH
	CHD.	26.02.2024	BLS
	SCALE:	N.T.S	

SEE TABLE

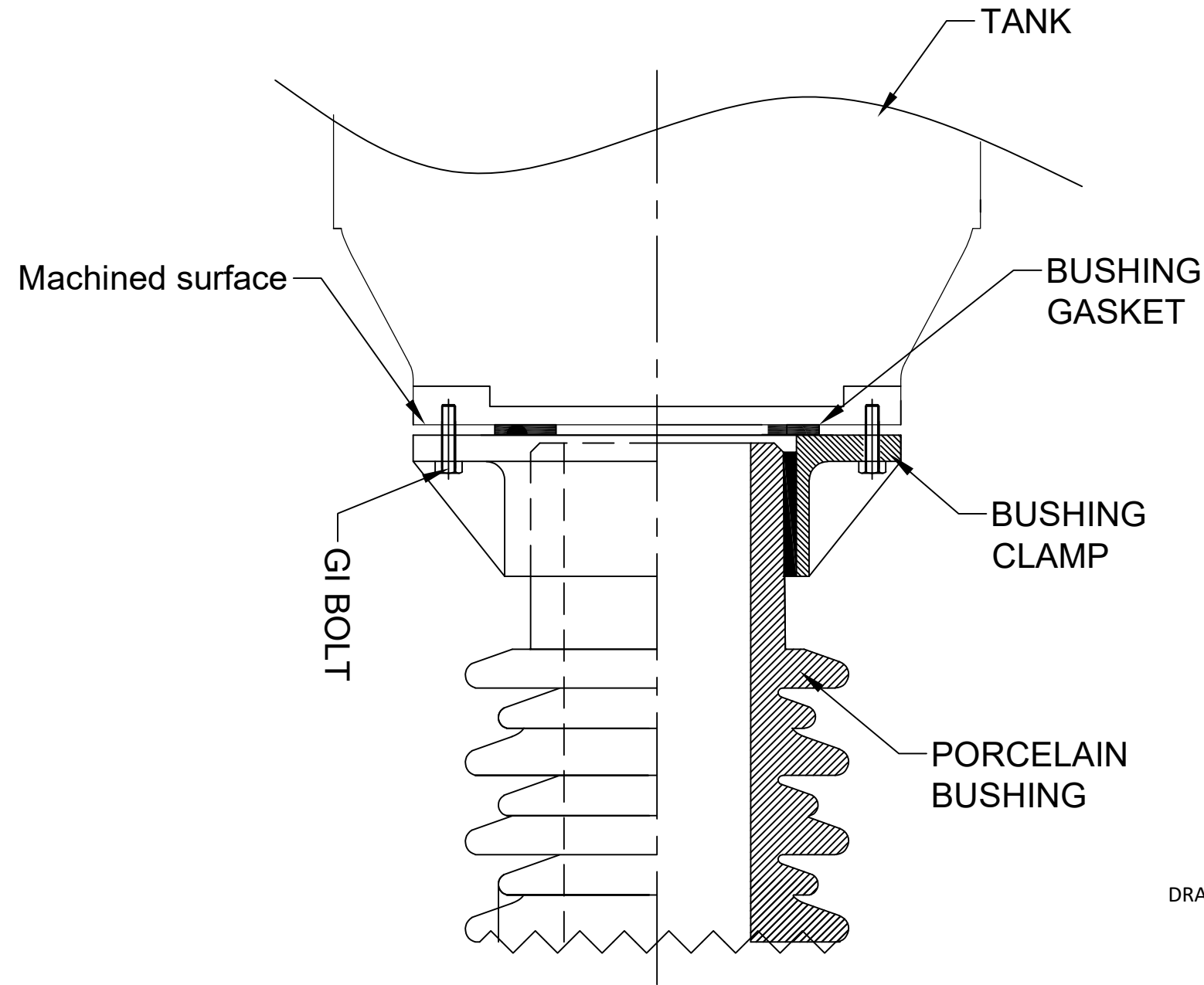
TITLE :
BELLOW DRAWING FOR 400kV CURRENT TRANSFORMER
RATIO : 500-1000-2000-3000/1A,5C
BAR TYPE CT

MEHRU
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

DRG.NO
ME-400CT-BELLOW-01

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

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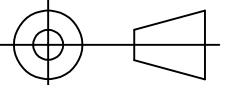
DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

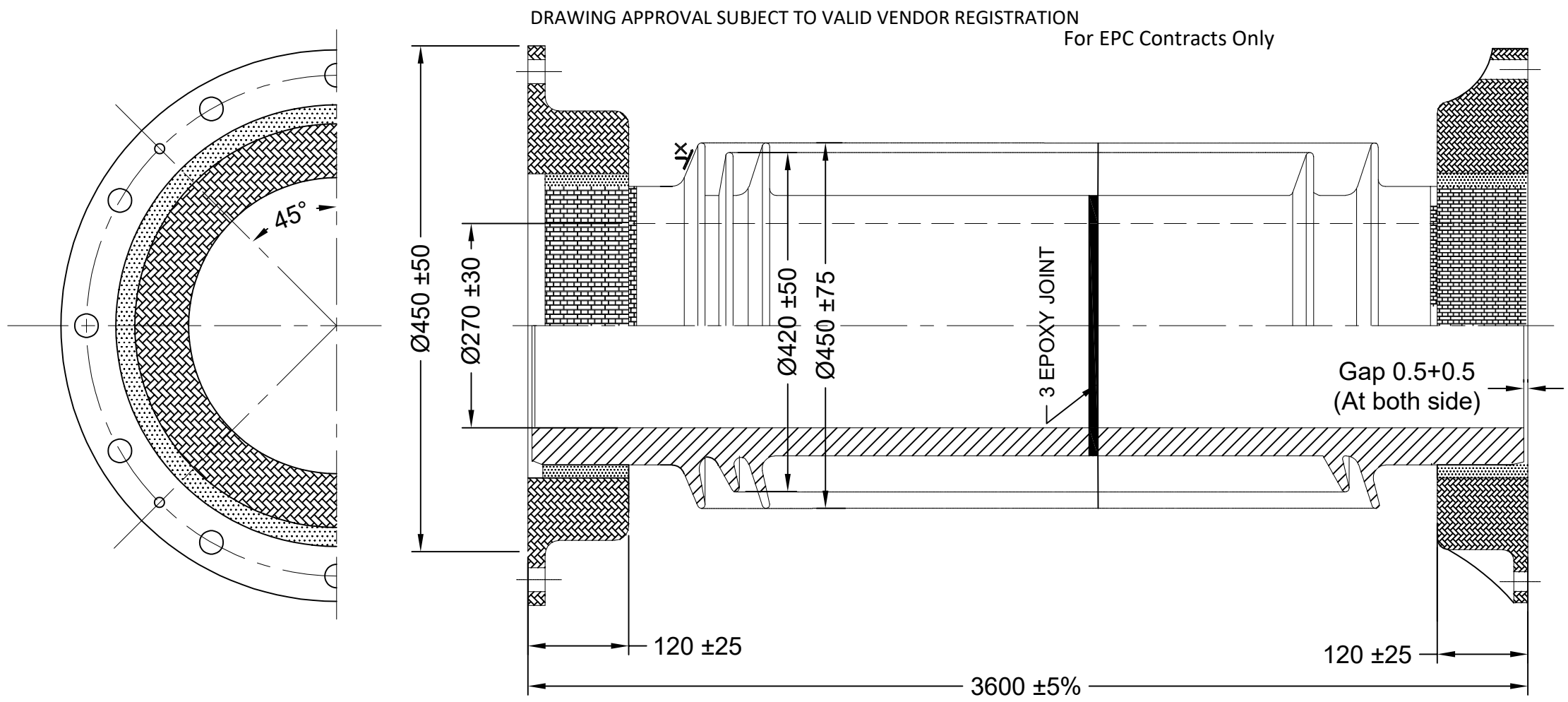
- 1. ALL DIMENSIONS ARE IN mm.
- 2. TOLERANCE WHEREVER NOT INDICATED : ±5%

NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE			
UNLESS OTHERWISE SPECIFIED 1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	26.02.2024	SPS
	DRN.	26.02.2024	AKASH
	CHD.	26.02.2024	BLS
	SCALE:	N.T.S	
MATERIAL			AS ABOVE
TITLE :			 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
BUSHING CLAMPING ARRANGEMENT DRG. FOR 400kV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT			
			
			DRG.NO ME-400CT-BCA-01

MAKE :- IEC/MODERN/BHEL/ABIL.



NOTES :

1. STANDARD APPLICABLE IS:5621-1980/IEC : 62155/IEC: 815
2. SURFACES MARKED THUS ARE TO BE UNGLAZED AND GROUND & PERPENDICULAR TO THE AXIS & PARALLEL TO EACH OTHER.
3. TOTAL CREEPAGE DISTANCE - 10,500 mm MINIMUM.

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : ±5%

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

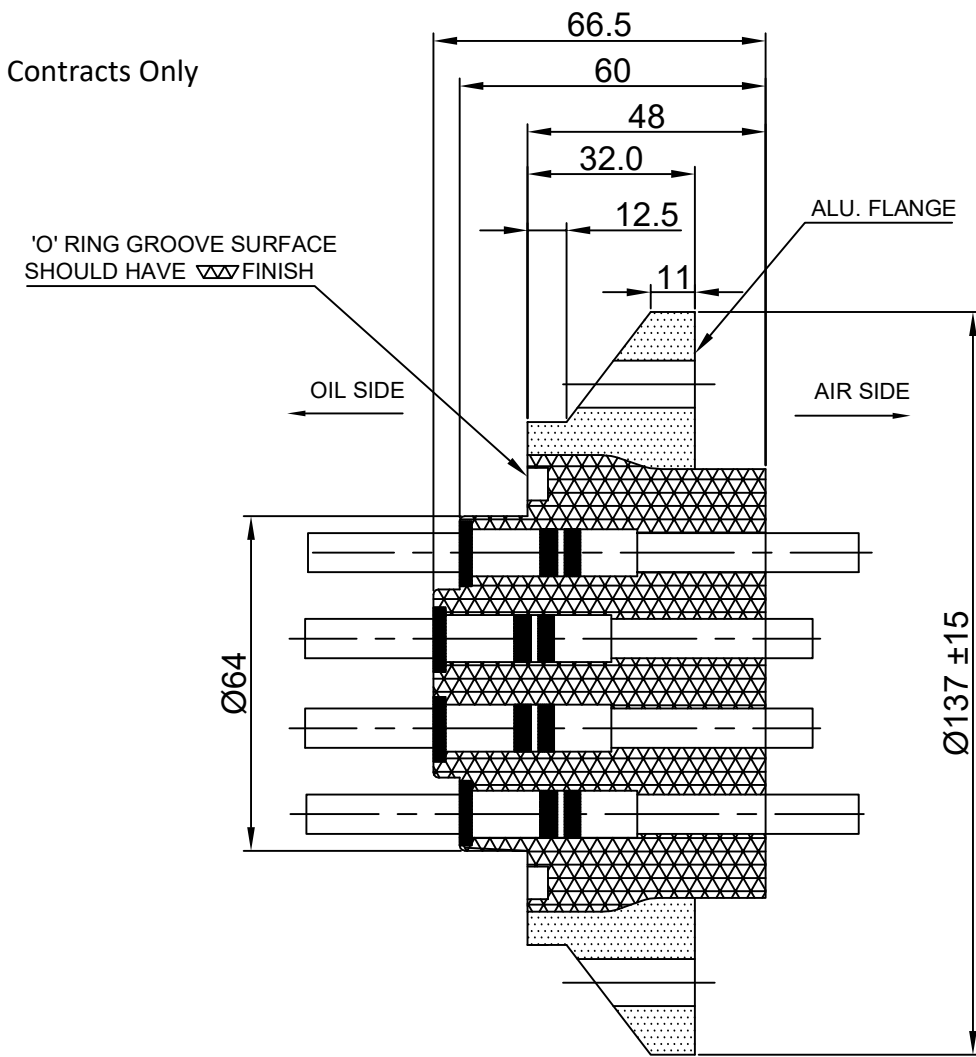
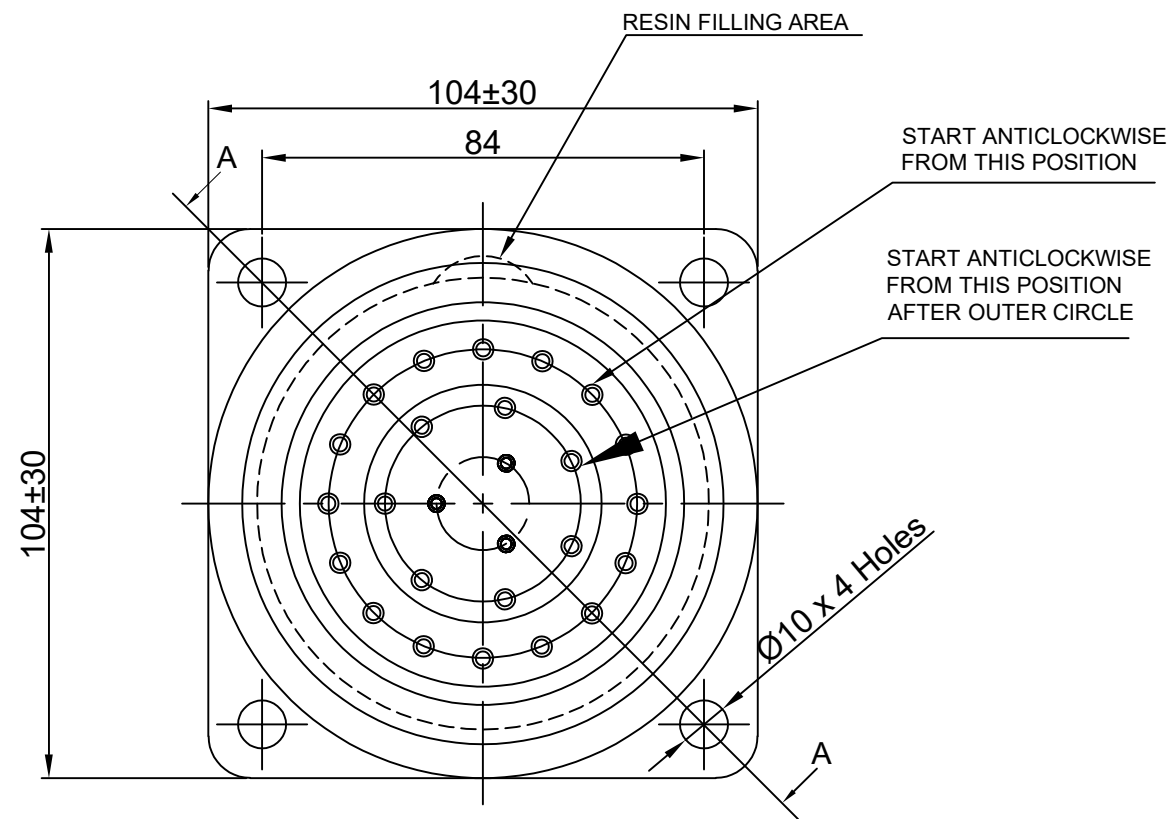
NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

REV.	FOR APPROVAL	26.02.2024
REV.	REVISION DESCRIPTION	DATED INITIALS

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE			
UNLESS OTHERWISE SPECIFIED 1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	26.02.2024	SPS
	DRN.	26.02.2024	AKASH
	CHD.	26.02.2024	BLS
	SCALE:	N.T.S	
TITLE :			MEHRU MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
BUSHING DRAWING FOR 400kV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT			
			DRG.NO ME-400CT-BUSH-01

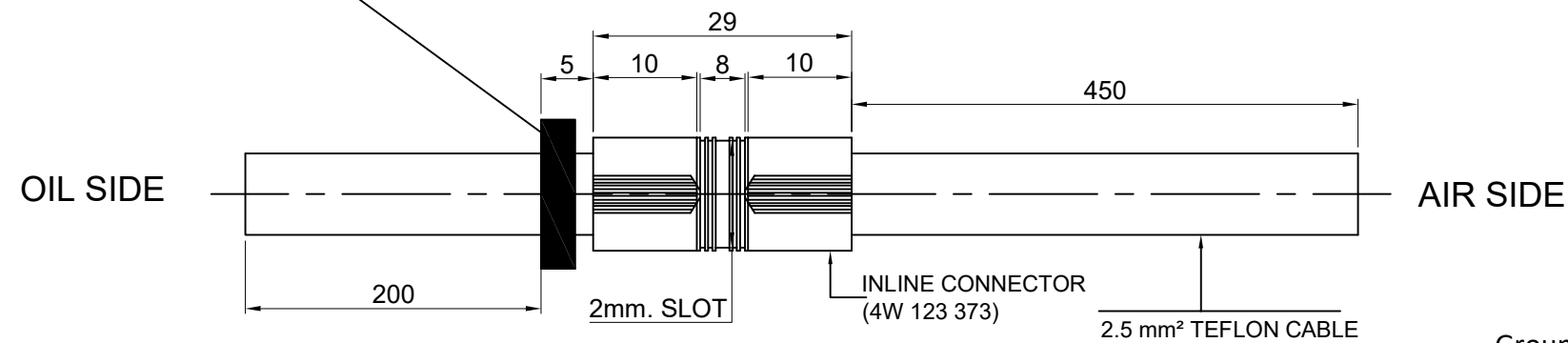
DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

For EPC Contracts Only



SECTION:A-A

Nitrile Rubber Gasket for 2.5 mm² =I.D,3 / O.D,9 x 3 Thk.



NOTE:-

VITON 'O' RING FOR MONOBLOCK: ID-69.2,C/S-5.3,

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

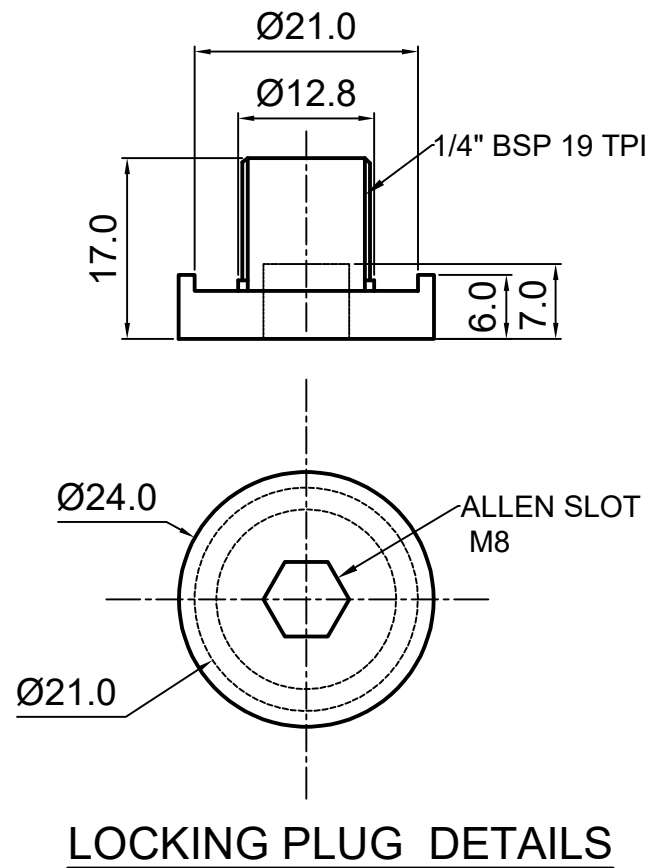
1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : ±5%

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

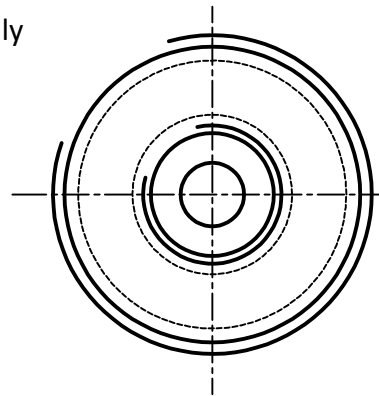
NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

REV.	FOR APPROVAL	26.02.2024
REV.	REVISION DESCRIPTION	DATED INITIALS

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				<p>MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.</p>
PROJECT NAME : AS APPLICABLE				
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm.	DGN. 26.02.2024	SPS	EPOXY	
2. TOLERANCE WHEREVER NOT INDICATED ±5%	DRN. 26.02.2024	AKASH		
	CHD. 26.02.2024	BLS		
SCALE:	N.T.S			
TITLE :				
EPOXY BLOCK DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT				
DRG.NO				ME-400CT-EB-01
ME-400CT-EB-01				

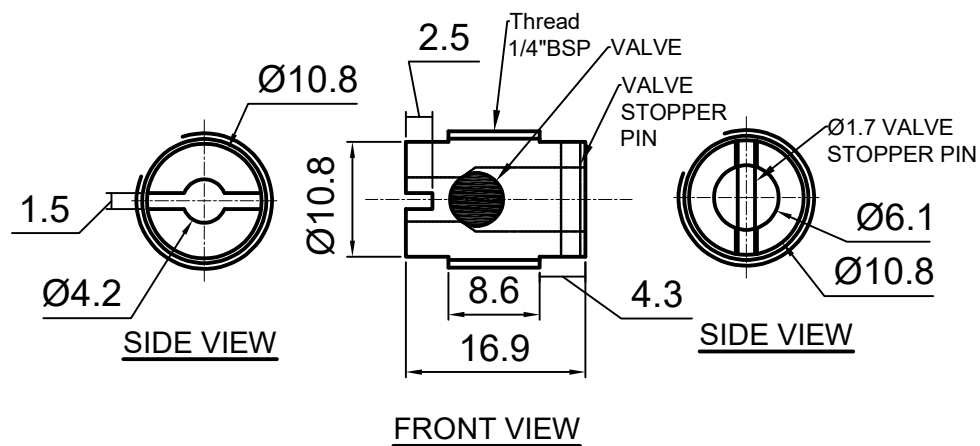
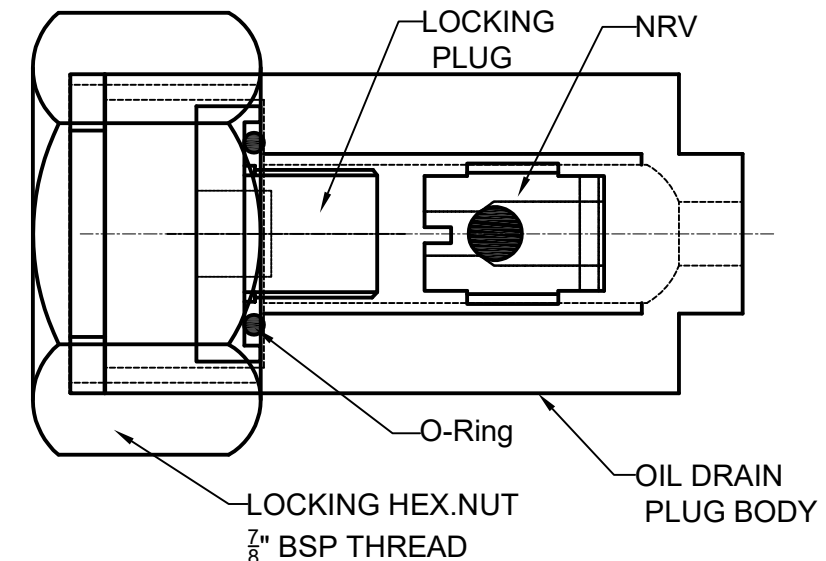
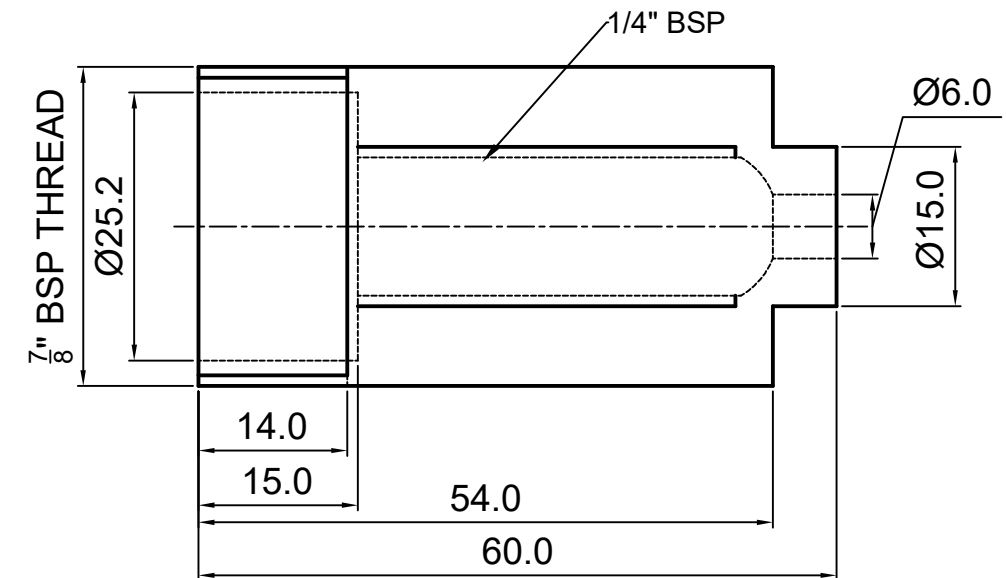


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SR.NO	DISCRPTION	MATERIAL
1	NRV (1/4" BSP)	M.S(HDG)/S.S
2	LOCKING PLUG 1/4" BSP	M.S(HDG)
3	OIL DRAIN PLUG BODY	M.S(HDG)
4	LOCKING HEX NUT 7/8" BSP THREAD	M.S(HDG)

DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION



Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : ±5%

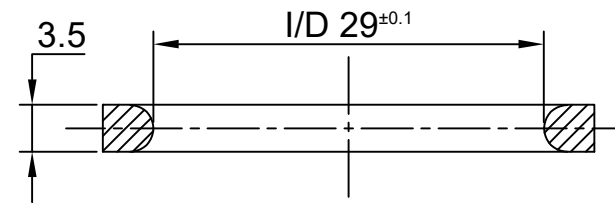
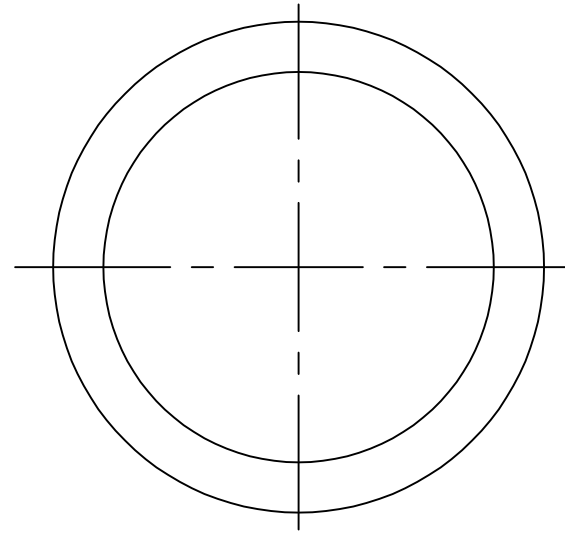
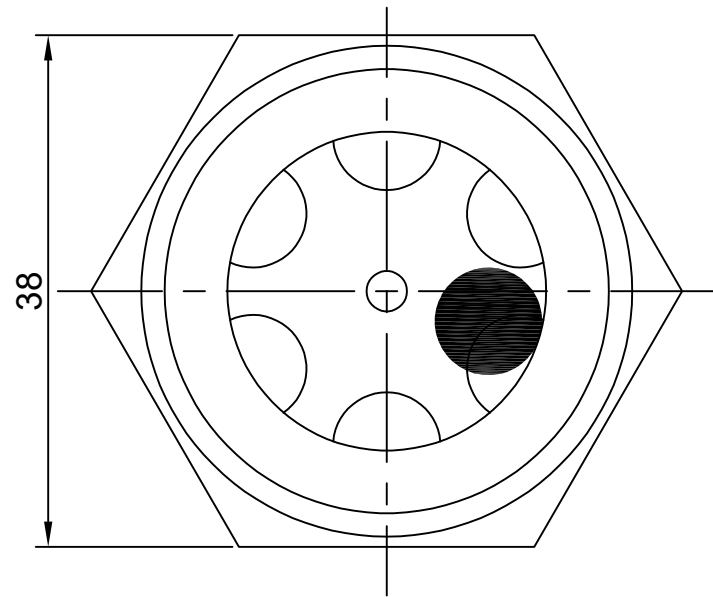
NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
TO BE CHECKED DURING ACCEPTANCE TESTS

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				<p>MEHRU MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.</p>
PROJECT NAME : AS APPLICABLE				
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN. 26.02.2024 DRN. 26.02.2024 CHD. 26.02.2024 SCALE: N.T.S	SPS AKASH BLS	SEE TABLE	
TITLE : OIL DRAIN PLUG DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT				<p>DRG.NO ME-400CT-ODP-01</p>

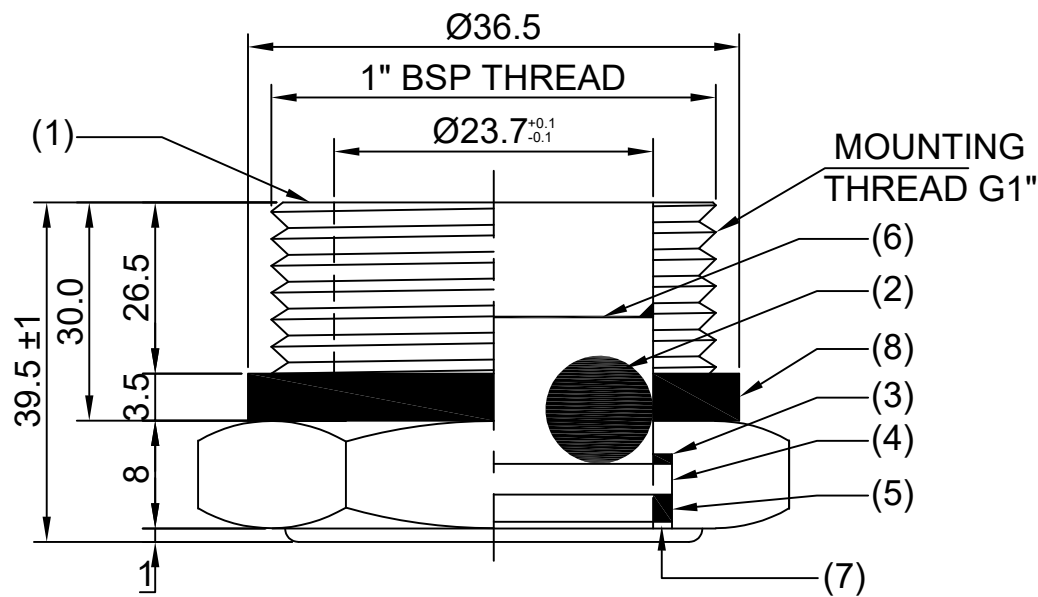
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DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION



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MOUNTING FLAT RING



PART LIST


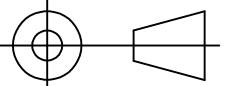
PART No.	QTY.	DESCRIPTION	MATERIAL
01	1	BODY	BRASS EXTRUDED/ALUMINIUM
02	1	FLOAT	NITROPHYL GREEN/RED/BLACK BALL
03 & 05	1	INNER RUBBER RING	NITRILE BUTADIENE RUBBER
04	1	LENS	TRANSPARENT TOUGHENED GLASS
06	1	RETAINER	STAINLESS STEEL
07	1	PROTECTIVE RING	BRASS/ALUMINUM
08	1	MOUNTING FLAT RING	NITRILE BUTADIENE RUBBER

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

- 1. ALL DIMENSIONS ARE IN mm.
- 2. TOLERANCE WHEREVER NOT INDICATED : ±5%

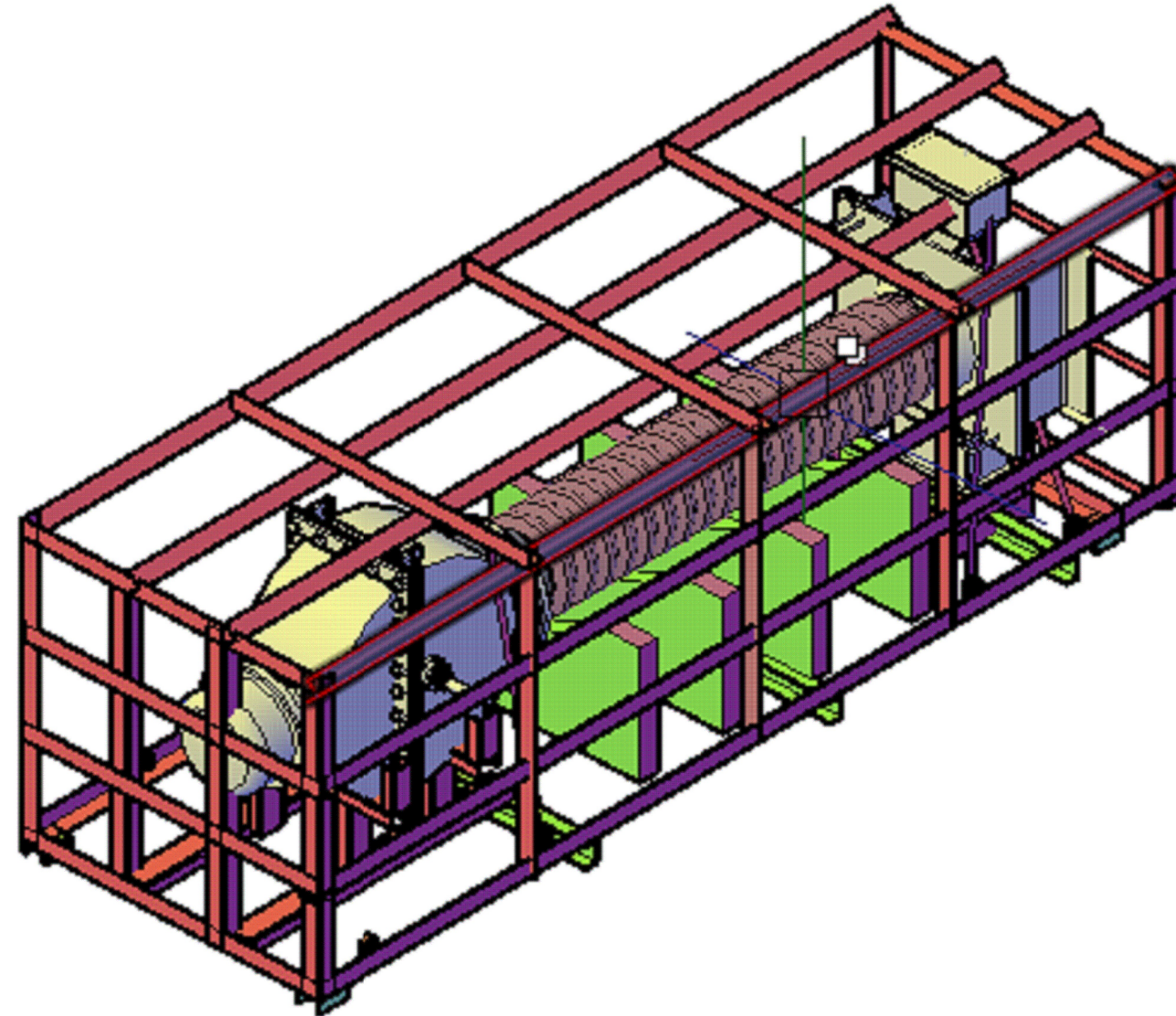
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REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				PROJECT NAME : AS APPLICABLE	
UNLESS OTHERWISE SPECIFIED 1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	26.02.2024	SPS	MATERIAL SEE TABLE	 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
	DRN.	26.02.2024	AKASH		
	CHD.	26.02.2024	BLS		
	SCALE:	N.T.S			
TITLE :				 OIL LEVEL INDICATOR DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT	
				DRG.NO ME-400CT-OLI-01	

DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

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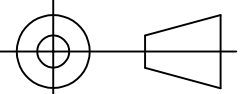
TOTAL WEIGHT WITH PACKING :1600 Kg. APPROX.
TOTAL WEIGHT OF PACKING : 150 Kg. APPROX.

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

1. ALL DIMENSIONS ARE IN mm.
2. TOLERANCE WHEREVER NOT INDICATED : ±5%

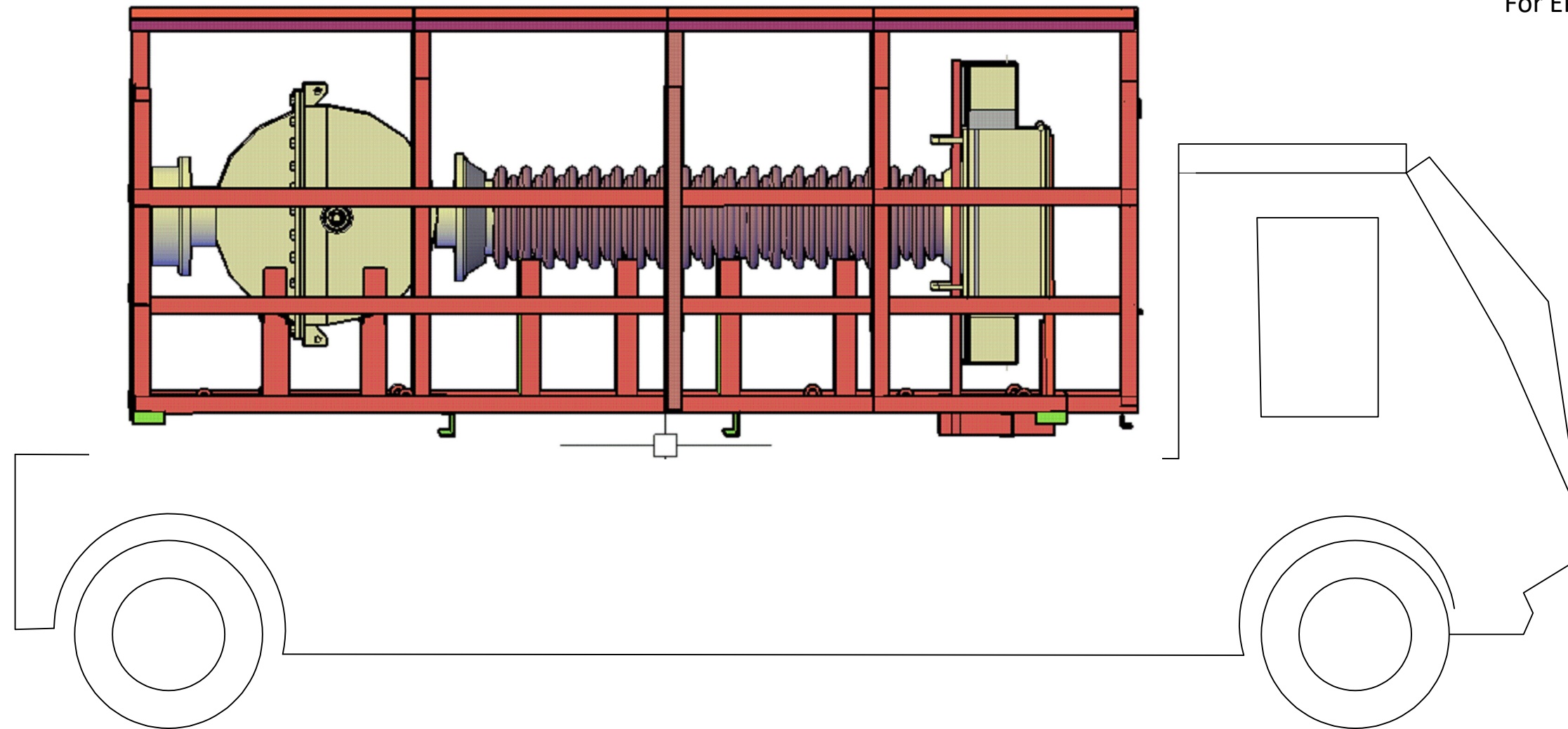
NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
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REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE			
UNLESS OTHERWISE SPECIFIED 1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	26.02.2024	SPS
	DRN.	26.02.2024	AKASH
	CHD.	26.02.2024	BLS
	SCALE:	N.T.S	
TITLE :		PACKING DRAWING FOR 400kV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT	
		 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.	
			
		DRG.NO ME-400CT-PACKING-01	

DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

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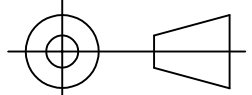
Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

- 1. ALL DIMENSIONS ARE IN mm.
- 2. TOLERANCE WHEREVER NOT INDICATED : ±5%

Chief Engineer/Projects
APTRANSCO/VS/Vijayawada.

NOTE: DRAWING APPROVAL SUBJECT TO VALID TYPE TESTS REPORTS
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REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
PROJECT NAME : AS APPLICABLE				
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN. 26.02.2024 DRN. 26.02.2024 CHD. 26.02.2024	SPS AKASH BLS		
SCALE: N.T.S.			TITLE :	 DRG.NO ME-400CT-LOADING-01
			LOADING DRAWING FOR 400kV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT	

GTP FOR 400 kV CURRENT TRANSFORMER

400kV CURRENT TRANSFORMER RATIO 500-1000-2000-3000/1-1-1-1-1A, WITH LOWER

1	Name and address of Manufacturer	:	Mehru Electrical & Mechanical Engineers (P) Ltd. SP-2/180, RIICO Industrial Area, Kehrani Bhiwadi, Distt. Alwar (Rajasthan) - 301019
1. A .	Type of Insulation	:	A
2	Manufacturer's Type designation	:	Outdoor oil cooled live tank type
3	Standards applicable	:	IS 16227
4	Rated Frequency (Hz)	:	50 Hz
5	a) Rated voltage Ur (kV)	:	400 kV
	b) Rated voltage Um(kV)	:	420 kV
6	Rated Current	:	
	i) Rated Primary Current	:	500-1000-2000-3000 Amp.
	ii) Rated Continuous Thermal Current (A)	:	120% OF 3000A, 180% OF 2000A, 200% OF 1000A & 200% OF 500A
7	Short time thermal current withstand for 1 sec (kA)	:	63 kA
8	Dynamic current withstand (kAp)	:	157.5 kA
9	1.2/50 micro s impulse withstand voltage (kVp)	:	± 1425 kV
10	250/2500 micro switching surge withstand voltage (kVp dry and wet)	:	1050 kV
11	a. One Minute dry and wet power frequency withstand voltage (kV rms)	:	630 kV
	b. One Minute power frequency withstand Voltage of Secondary winding	:	5 kV rms
12	No. of cores per CT	:	5
13	Transformation ratio	:	500-1000-2000-3000 / 1-1-1-1-1 A
14	No. of secondary turns	:	500+500+1000+1000
15	Rated output (VA) at different taps	:	Core-1 Core-2 Core-3 Core-4 Core-5 --- --- 20VA --- ---
16	Accuracy class	:	PX PX 0.2s PX PX PX
17	Instrument security factor at different ratios	:	<5
18	Knee point voltage (V) at different taps	:	500/1000 500/1000 500/1000 500/1000 /2000 /2000 /2000 /2000 /3000V /3000V /3000V /3000V
19	Secondary data	:	
	a) Secondary resistance at different taps	:	2.5/5.0/ 2.5/5.0/ 2.5/5.0/ 2.5/5.0/ 10/15Ω 10/15Ω 10/15Ω 10/15Ω
	b) Oversize factor and transient error under CO-t-CO duty condition with t=400 ms and duration of fault (100ms)	:	NOT APPLICABLE

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DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION

Ground clearance of 8000mm shall be maintained during erection. Plinth height of 300mm shall be maintained

		For Core - I,II, IV & V
20	Maximum exciting current at V _k	
	a) 100 % kpV (mA)	: 120/60/30/20mA
	b) 25 % kpV (mA)	: NA
	c) 20 % kpV (mA)	: NA
	d) 10 % kpV (mA)	: NA
21	Accuracy Limit factor	: NA
22	Radio Interference voltage at 1.1*Um√3 at 1.0 MHz	: <1000 μV
23	Whether auxiliary CT/reactor provided for metering winding	: Yes
24	Corona extinction voltage (kV rms)	: 320kV (Min.)
25	Partial discharge level (pC)	: As Per IEC 61869
26	Total creepage distance (mm)	: 10500 (min.) , i.e 25 mm / kV
27	Primary Winding	
	a) No. of primary turns	: 1
	b) Material and cross section of primary	: Aluminium / 4400 sqmm.
	c) Whether bar type or ring type primary	: Bar primary
28	Whether CT is suitable for transportation horizontally	: Yes
29	Composite error at rated burden and at	
	a) 20% rated current	: Within limits As per IS 16227
	b) 120% rated current	: Within limits As per IS 16227
30	Composite error at 25% rated burden and at	
	a) 20% rated current	: Within limits As per IS 16227
	b) 120% rated current	: Within limits As per IS 16227
31	Quantity of oil per CT (litres)	: 425 Approx
32	Whether spark gas / surge arrester provided at the primary	: No, not reqd.
33	Standard to which oil conforms generally	: IS 335
34	Characteristics of oil (prior to filling)	DRAWING APPROVAL SUBJECT TO VALID VENDOR REGISTRATION
	a) Breakdown voltage (kV)	: 70 (min.)
	b) Dielectric dissipation constant	: 0.002 at 90 deg.C (max.)
	c) Water content (ppm)	: 10 (max.)
	d) Gas content (ppm)	: Within limits as per IS 335
	e) Interfacial tension at 27C (N/m)	: 0.04 (min.)
	f) Specific resistance	
	i. At 90C (ohm-cm)	: 35 x 10 ¹² (min.)
	ii. At 27C (ohm-cm)	: 1500 x 10 ¹² (min.)
35	Whether current transformers are hermetically sealed. If so, how ?	: Yes by SS BELLOW
36	Total weight (mg)	: 1450 Kg. approx
37	Transport weight (kg)	: 1600 kg. approx

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38	Dimensional details	
	i) Overall height from mounting plane	: 5500 ± 5%mm
	ii) Height upto terminals from mounting plane	: 4350 ± 5%mm
	iii) Mounting dimensions and diameter of mounting holes	: 600±5 x 600±5mm, 30 Dia ± 2
	iv) Terminal detail	: 200 mm x 130 mm
	v) Material of terminal pad	: Aluminium
39	Temperature rise over an ambient temp. of 50 deg C	: Within limits as per IS 16227
40	Transient over voltage withstand of	
	a) 30 seconds (kVp)	: N/A as per IS 16227
	b) 1min (kVp)	: N/A as per IS 16227
41	Details of recommended support structure enclosed	: Not in our scope of supply
42	Drawing showing clearance from earthed objects enclosed	: Not in our scope of supply
42	Type Test Reports as per IEC enclosed	: Enclosed
44	OGA drawing enclosed	: Enclosed
45	Details of spark gap provided at the primary enclosed	: Not required
46	Cross section area of secondary winding	: 1.16 Sq mm
47	Material of Secondary Cores	: CRGO Grade M4 for protection and nano Crystalline or Mu Metal for Metering Core
48	Rated Current capacity of secondary winding	: 2 Amps
49	Cantilever Strength of CT	: 500kg (Min.)
50	Tan delta	: <0.5%
51	Variation of Tandelta from 10kV to Um/ ^{√3}	: <15%

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