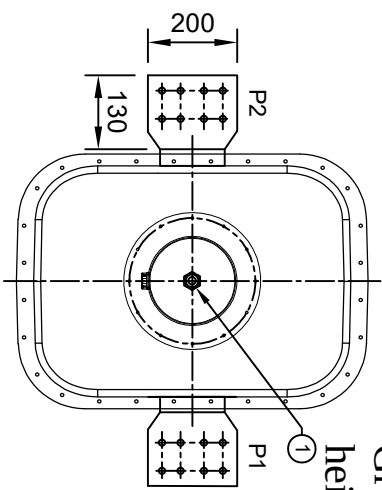
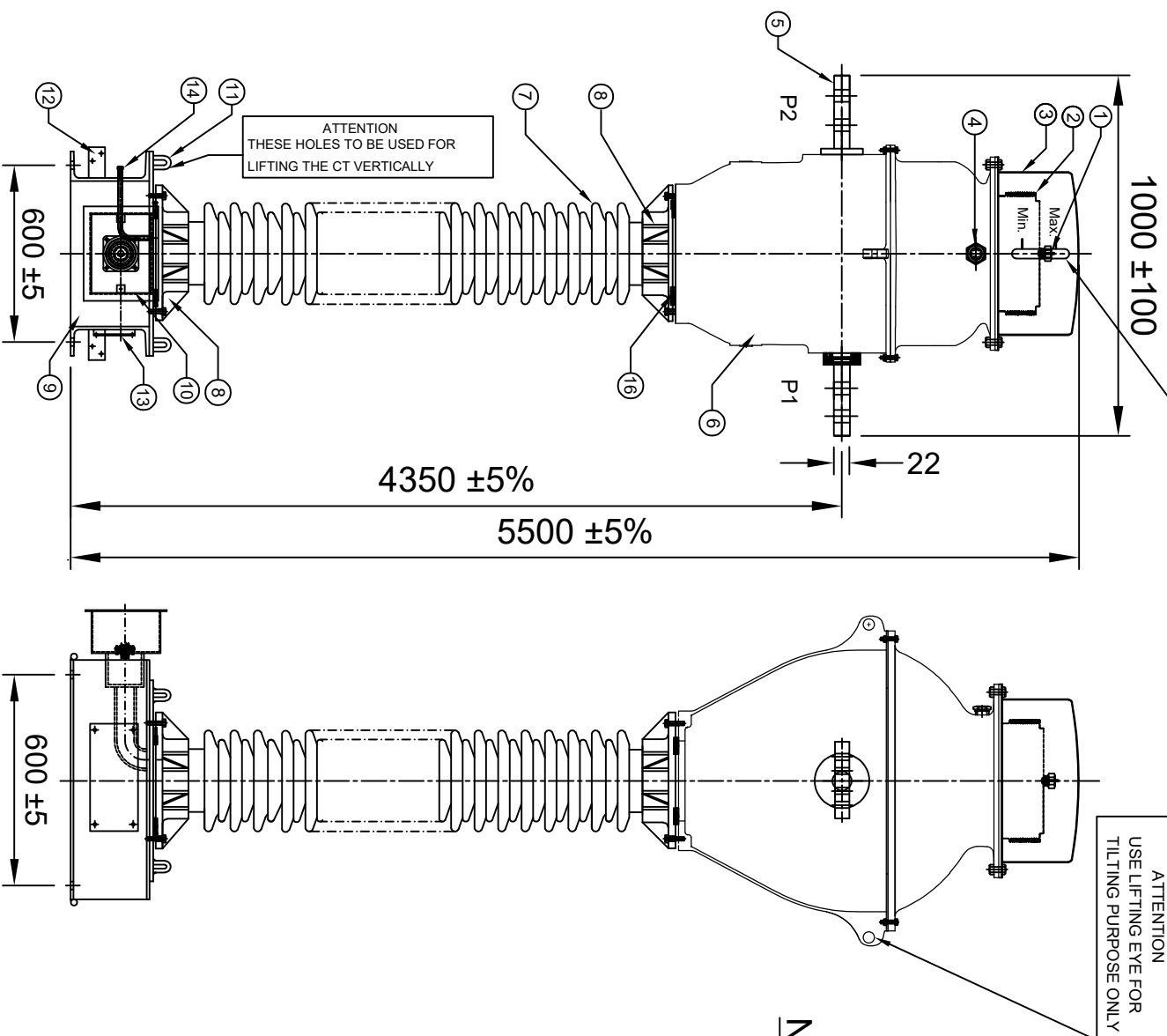


Ground clearance of 8000 mm shall be maintained during erection. Plinth height of 300 mm shall be maintained



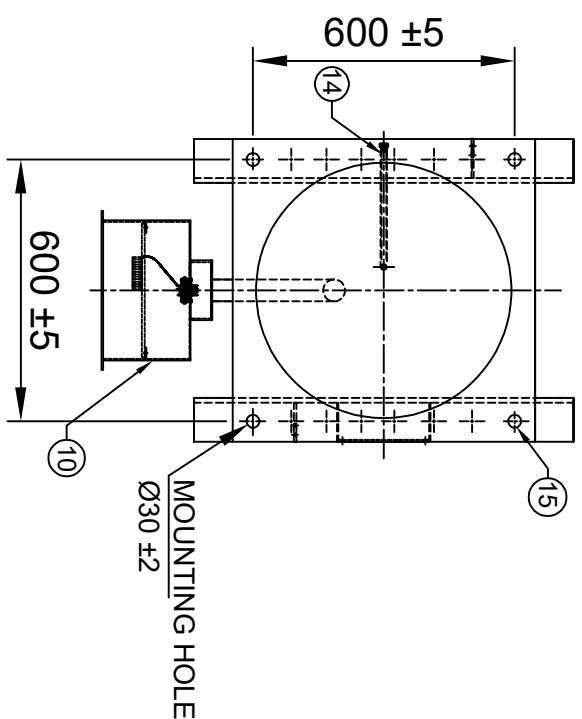
TOP VIEW

BELLOW INDICATOR



FRONT VIEW

SIDE 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	ALUMINIUM
4	OIL LEVEL INDICATOR	1	BRASS/AL.
5	PRIMARY TERMINAL	2	ALUMINIUM
6	OIL TANK WITH COVER	1	ALUMINIUM
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

For EPC Contracts Only

NOTES:-

1. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE HOT DIP GALVANIZED.
2. MAKE OF BUSHING: IEC/MODERN/BHEL/ABL.
3. TOTAL CREEPAGE DISTANCE :- 13,020mm (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 ALUMINIUM SHELL.

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

Chief Engineer
Projects

REV.	FOR APPROVAL	26.02.2024
	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.	DATE	NAME	MATERIAL
SPS	26.02.2024	AKASH	SEE TABLE
CHD	26.02.2024	BLS	

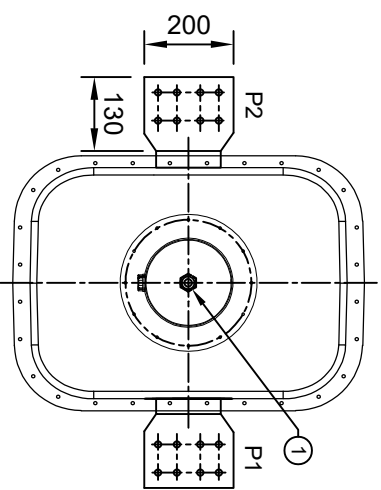
SCALE: N.T.S

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

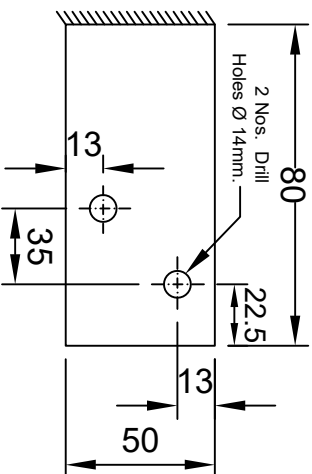
MEHRU
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

DRG.NO
ME-400CT-GA-01

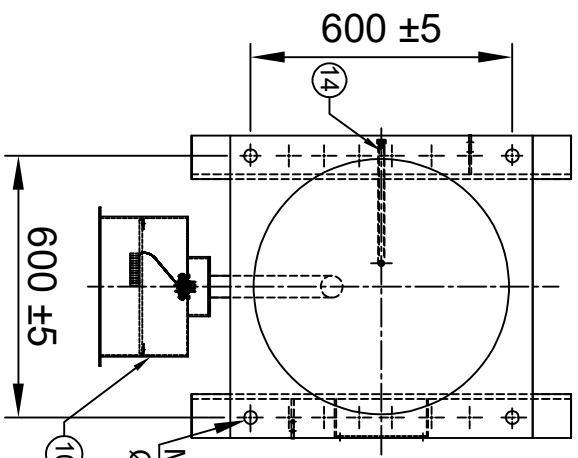
For EPC Contracts Only



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	G/I/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 TIENING STRING	--	NYLON
17	PRIMARY WINDING	--	ALUMINUM
18	PRESS BOARD	--	BAKELITE

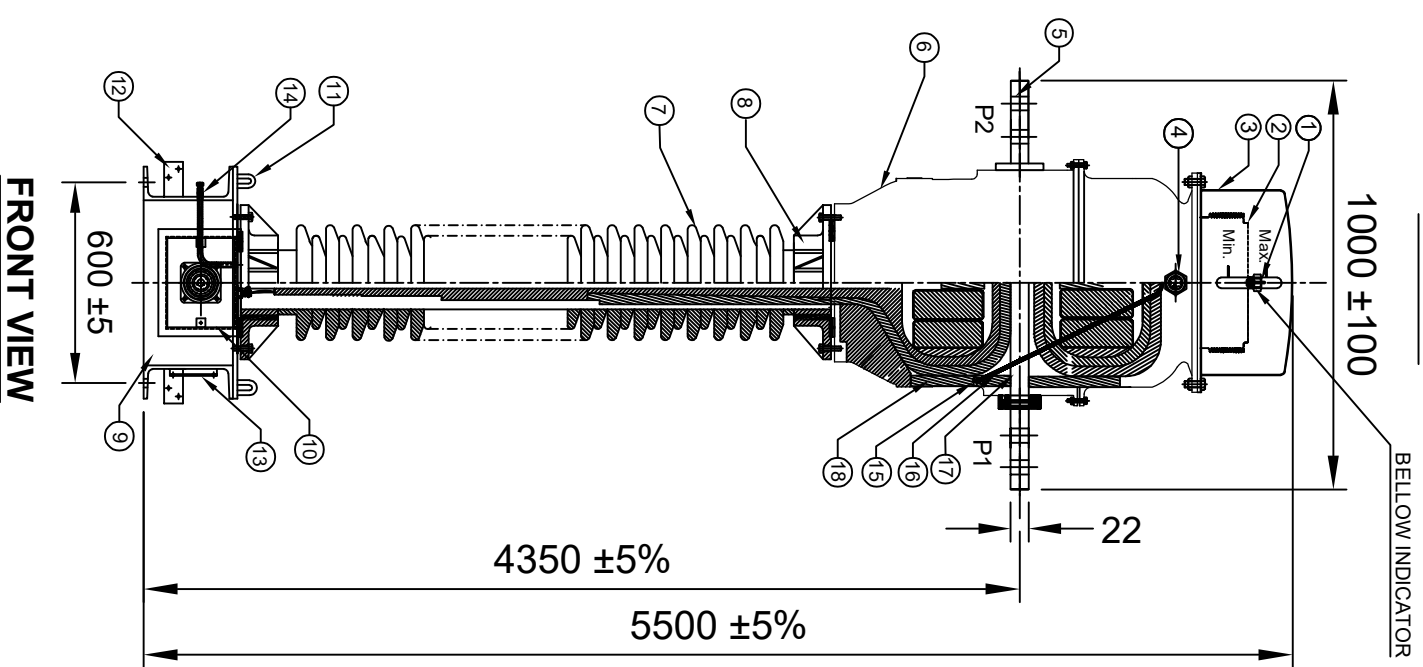
Ground clearance of 8000 mm shall be maintained during erection. Plinth height of 300 mm shall be maintained

NOTES:-

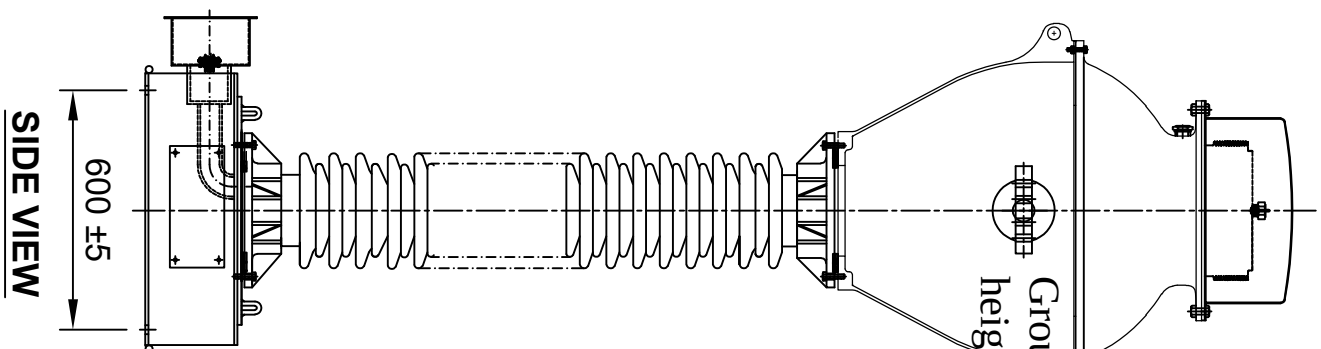
1. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE HOT DIP GALVANIZED.
2. MAKE OF BUSHING: IEC/MODERN/BHEL/ABIL.
3. TOTAL CREEPAGE DISTANCE :- 13,020mm (MINIMUM)
4. OIL QUANTITY IN LITRES :- 425 LITRES APPROX.
5. TOTAL WEIGHT OF CT :- 1450 kg. APPROX.
6. PRIMARY WINDING SHALL BE BAR TYPE.
7. ALL 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.

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.

TO BE CHECKED DURING ACCEPTANCE TESTS.



FRONT VIEW



SIDE VIEW

Chief Engineer
Projects

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.	DATE	NAME	MATERIAL
SPS	26.02.2024	AKASH	SEE TABLE
DRN	26.02.2024	BLS	
CHD	26.02.2024		
SCALE	N.T.S		
TITLE : SECTIONAL ARRANGEMENT DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT			
MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.			MEHRU
DRG.NO ME-400CT-SE-01			



LIVE TANK CURRENT TRANSFORMER

MADE TO IS: 16227

SUITABLE FOR HOT LINE WASHING
CONNECTION DIAGRAM

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	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	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	<2.5/5.0/10/15 Ohms
Max Ixct at V _k	120/60/30/20 mA	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 :- 13,020 mm (MINIMUM.)

MADE IN INDIA BY :

MEHRU ELECTRICAL AND MECHANICAL ENGINEERS (P) LTD.

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

265 ±20

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

Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/VT/CVT requirement and compatibility.

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

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.

TO BE CHECKED DURING ACCEPTANCE TESTS.

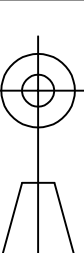
Chief Engineer
Projects

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.	DATE	NAME	MATERIAL
DRN.	26.02.2024	SPS	AL. ANODIZED
CHD.	26.02.2024	AKASH BLS	
SCALE:	N/T.S		

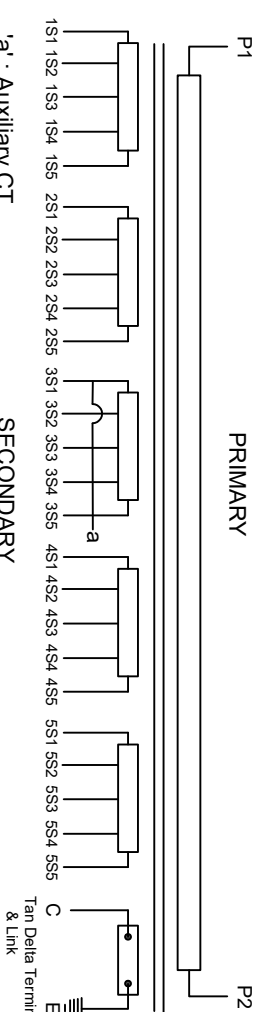
TITLE :
NAME PLATE DRAWING FOR
400KV CURRENT TRANSFORMER
RATIO : 500-1000-2000-3000/1A,5C
BAR TYPE CT

MEHRU ELECTRICAL &
MECHANICAL
ENGINEERS (P) LTD.DRG.NO
ME-400CT-NP-01

115 ±15

CAUTION

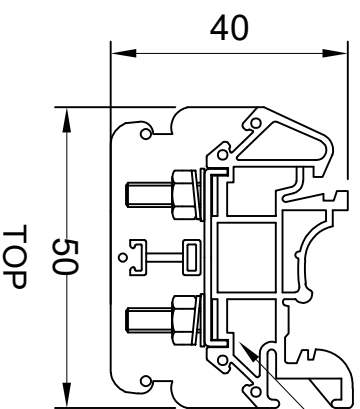
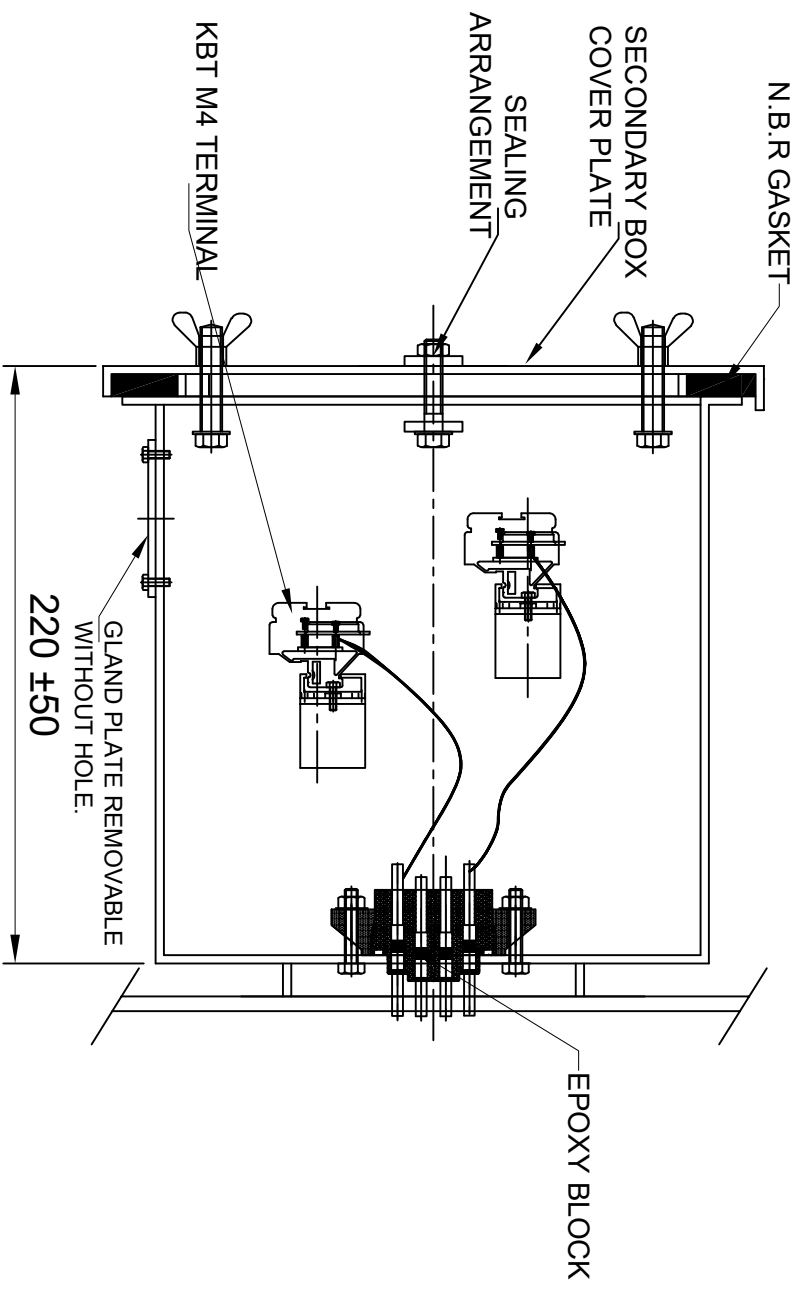
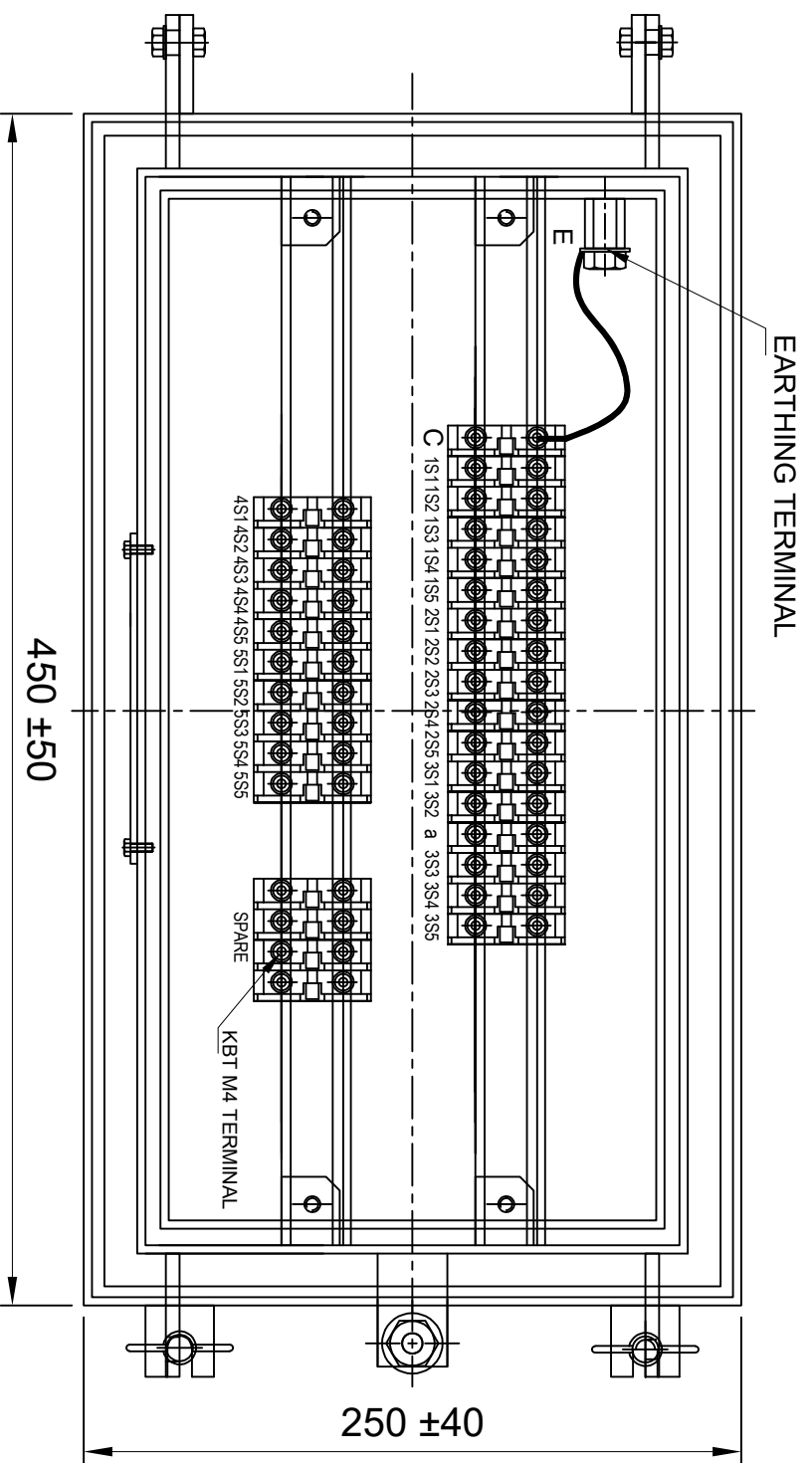
- I. SHORT CIRCUIT AND EARTH ALL SECONDARY TERMINALS WHICH ARE NOT IN USE.
- II. ALWAYS KEEP TAN DELTA TESTING TERMINAL 'C' SHORTED TO EARTH DURING OPERATION.
- III. DO NOT REMOVE EARTH LINK WHEN IN OPERATION.



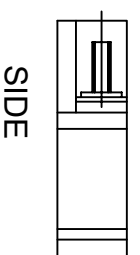
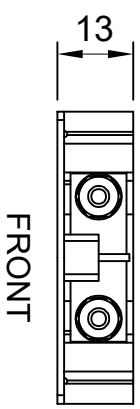
FOR RATIO	PRIMARY CONNECTION	SECONDARY CONNECTION				
		CORE 1	CORE 2	CORE 3	CORE 4	CORE 5
500/1A	P1 - P2	1S1-1S2	2S1-2S2	3S1-3S2 Short 3S2-a	4S1-4S2	5S1-5S2
1000/1A	P1 - P2	1S1-1S3	2S1-2S3	3S1-3S3 Short 3S3-a	4S1-4S3	5S1-5S3
2000/1A	P1 - P2	1S1-1S4	2S1-2S4	3S1-3S4 Short 3S4-a	4S1-4S4	5S1-5S4
3000/1A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

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
Tan Delta Terminal & Link

'a' : Auxiliary CT



KBT M4 TERMINAL



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.

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

MATERIAL: POLYAMIDE

MAKE: ELMEX

TERMINAL (DETAIL)

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.

TO BE CHECKED DURING ACCEPTANCE TESTS.

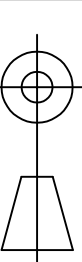
Chief Engineer
 Projects

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.	DATE	NAME	MATERIAL
DRN.	26.02.2024	SPS	M.S(HDG)
CHD.	26.02.2024	AKASH	
SCALE:	N.T.S	BLS	

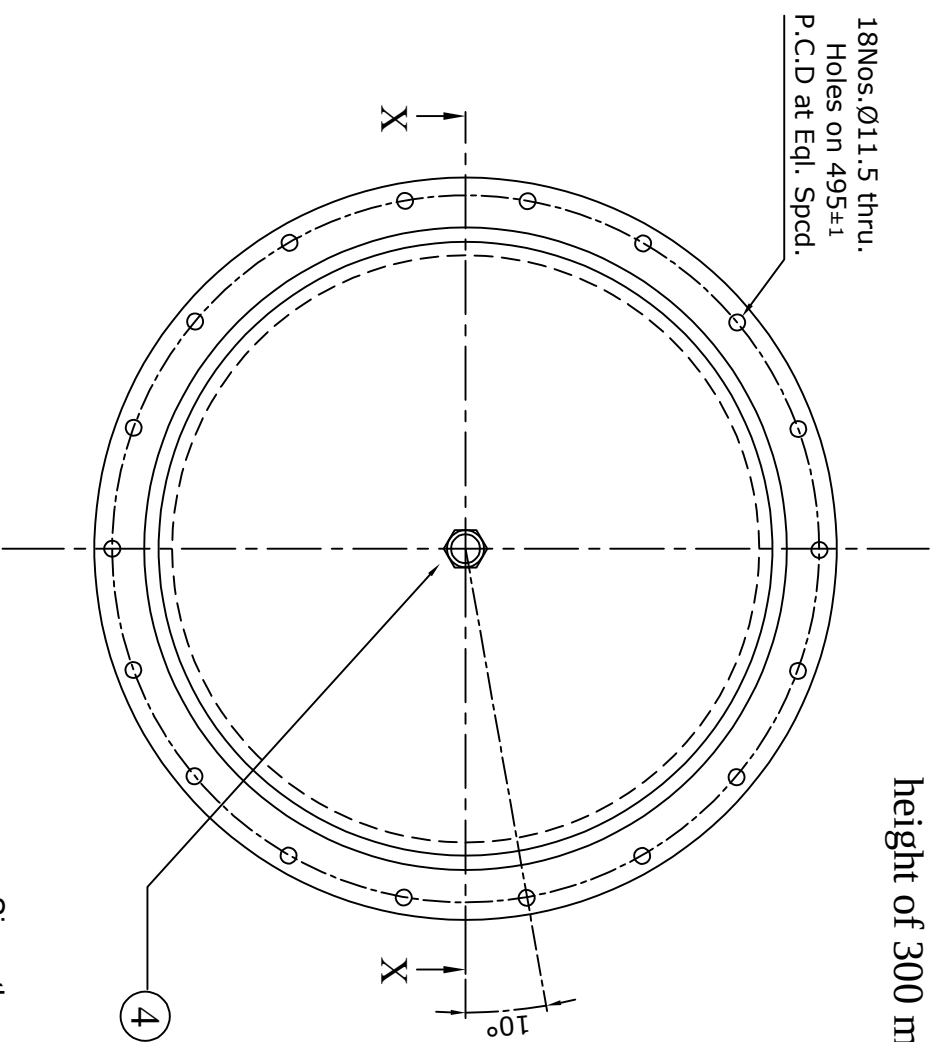
TITLE :
 SECONDARY TERMINAL BOX DRAWING
 FOR 400KV CURRENT TRANSFORMER
 RATIO : 500-1000-2000-3000/1A,5C
 BAR TYPE CT

MEHRU
 MEHRU ELECTRICAL &
 MECHANICAL
 ENGINEERS (P) LTD.



DRG.NO
 ME-400CT-STB-01

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



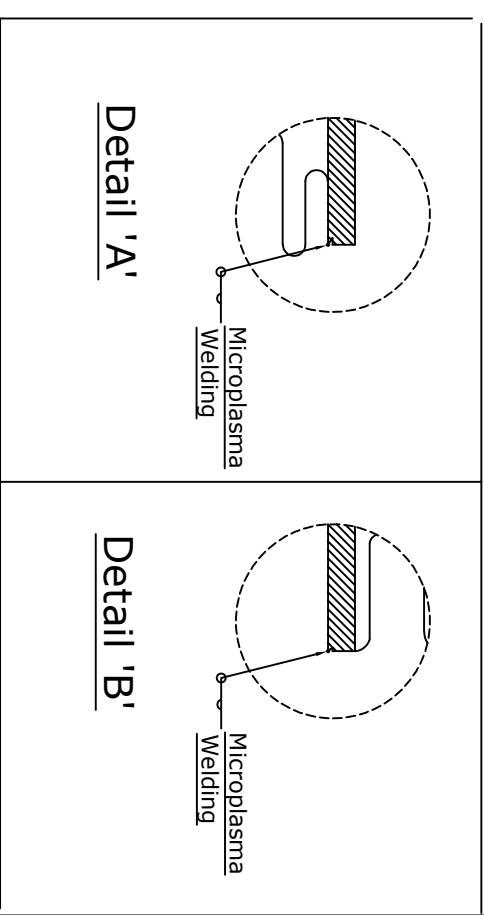
NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.
TO BE CHECKED DURING ACCEPTANCE TESTS.

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

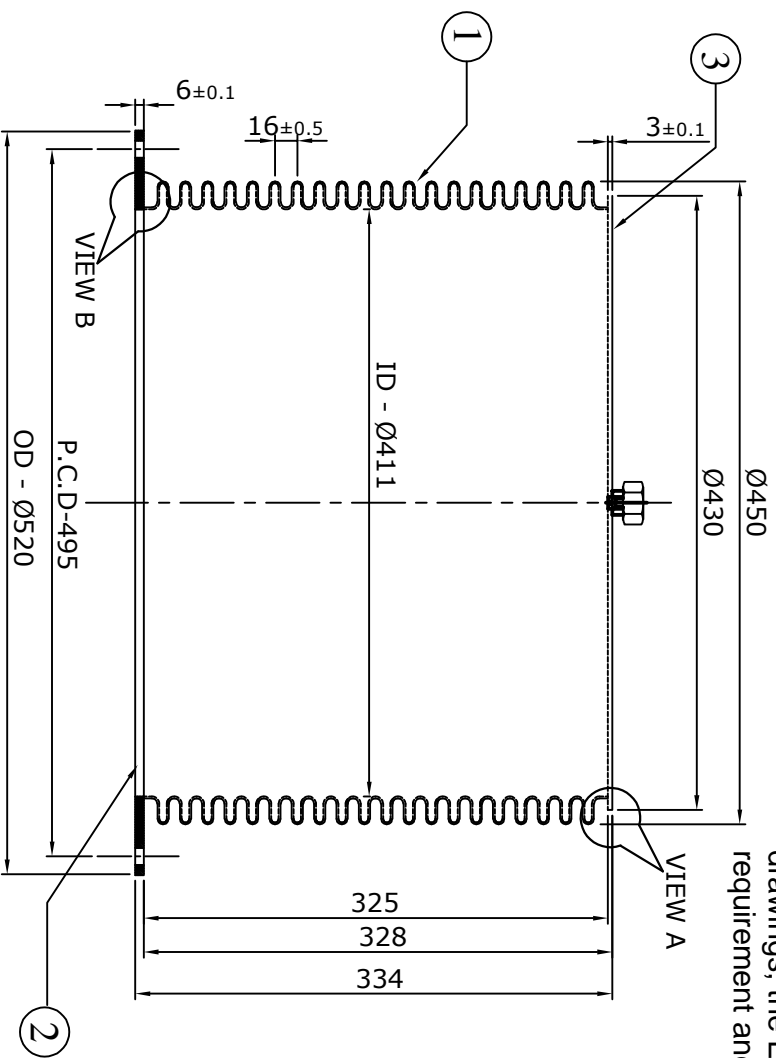
BELLOW DESIGN DETAIL:

- AXIAL MOVEMENT : 147 mm (EXPANSION)
- OPERATING PRESSURE : 130 mm (COMPRESSION)
- OPERATING TEMPERATURE : 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.

Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/IVT/CVT requirement and compatibility.



VIEW-XX

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

For EPC Contracts Only

Chief Engineer
Projects

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
DGN.	26.02.2024	SPS	SEE TABLE
DRN.	26.02.2024	AKASH	
CHD.	26.02.2024	BIS	
SCALE:	N.T.S		

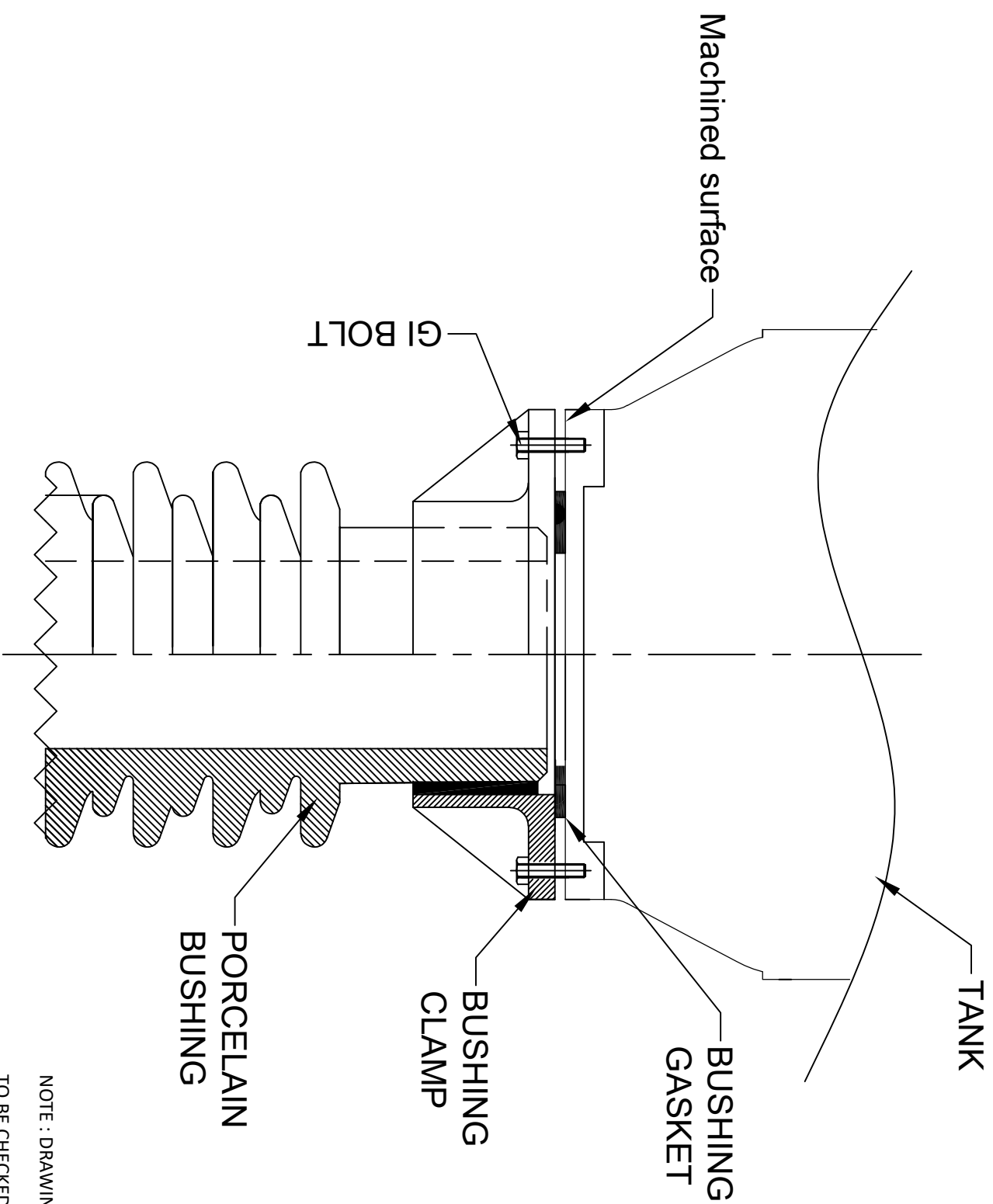
TITLE : BELLOW DRAWING FOR 400KV CURRENT TRANSFORMER
RATIO : 500-1000-2000-3000/1A,5C
BAR TYPE CT

MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

MEHRU

DRG.NO ME-400CT-BELLOW-01

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



For EPC Contracts Only

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

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

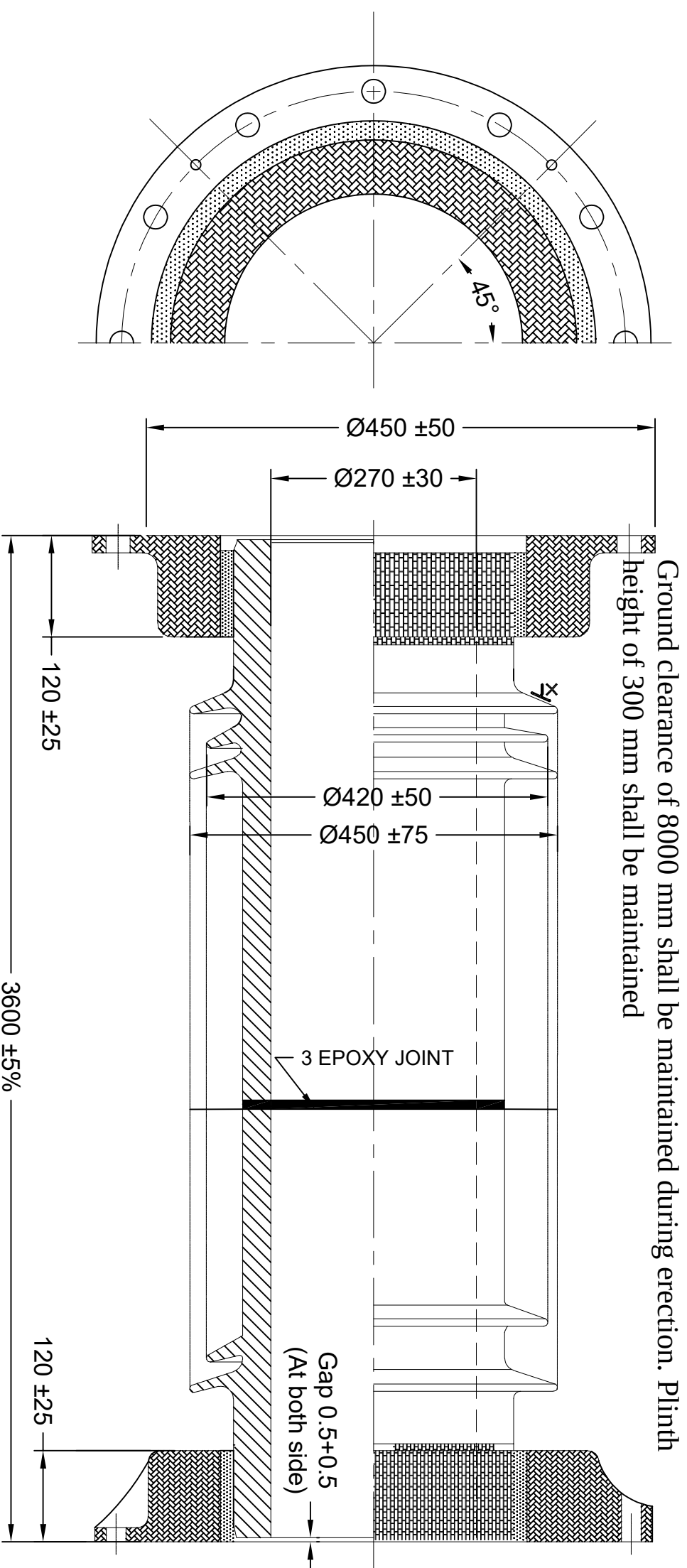
Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/VT/CVT requirement and compatibility.

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%			
DATE	NAME	MATERIAL	
26.02.2024	SFS	AS ABOVE	
DRN.	AKASH		
26.02.2024	BLS		
CHD.			
26.02.2024			
SCALE:	N.T.S		
TITLE :			
BUSHING CLAMPING ARRANGEMENT DRG.			
FOR 400KV CURRENT TRANSFORMER			
RATIO : 500-1000-2000-3000/1A,5C			
BAR TYPE CT			
		MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.	
DRG.NO			
ME-400CT-BCA-01			

REV.	FOR APPROVAL	26.02.2024
REV.	REVISION DESCRIPTION	DATED INITIALS


Chief Engineer
Projects

MAKE :- IEC/MODERN/BHEL/ABIL.



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

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 - 13,020 mm MINIMUM.

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

Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/IVT/CVT requirement and compatibility.

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

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%

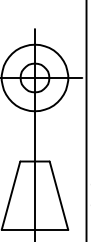
DGN.	DATE	NAME	MATERIAL
DRN.	26.02.2024	SPS	PORCELAIN
CHD.	26.02.2024	AKASH	
SCALE:	N.T.S	BLS	

TITLE :

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

MEHRU

MEHRU ELECTRICAL &
MECHANICAL
ENGINEERS (P) LTD.



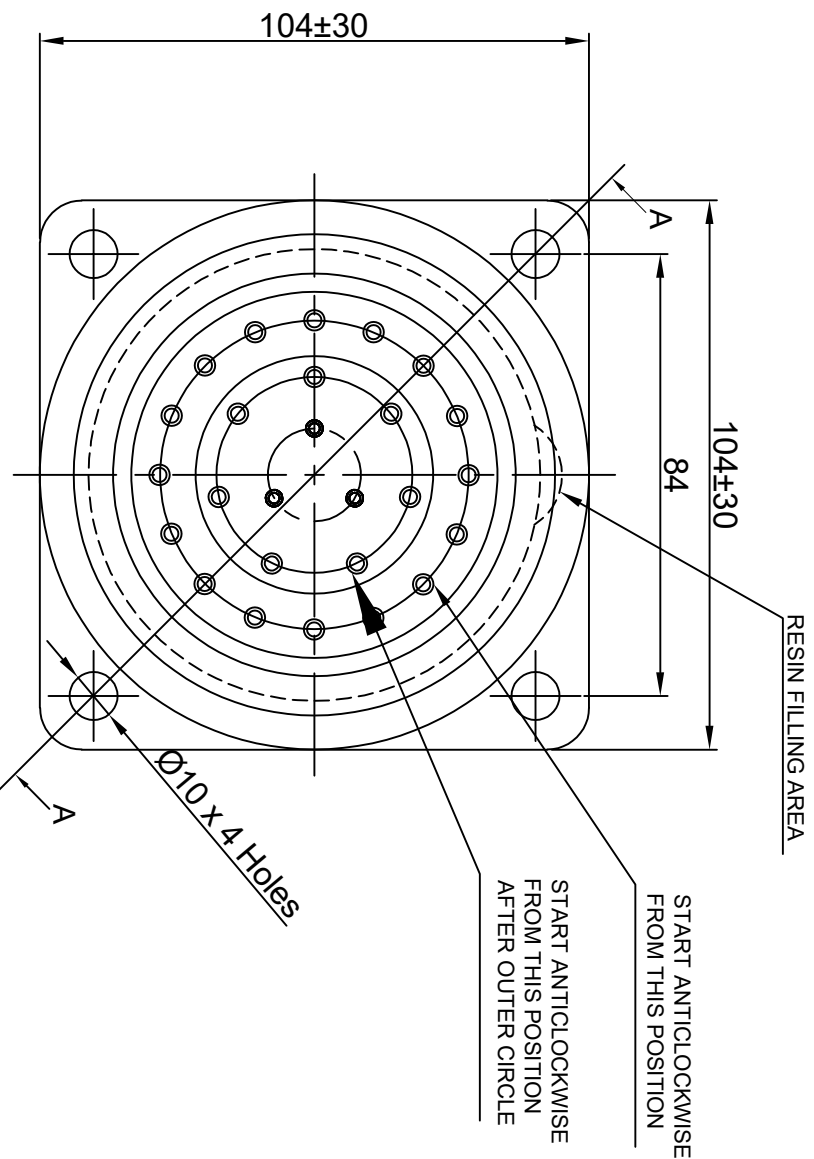
DRG.NO
ME-400CT-BUSH-01

For EPC Contracts Only

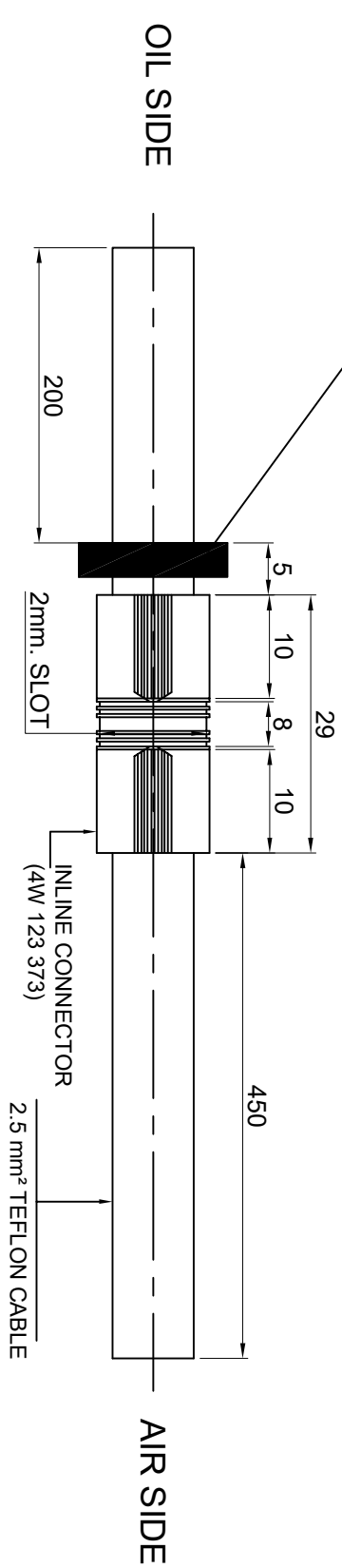
Chief Engineer
Projects

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

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



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

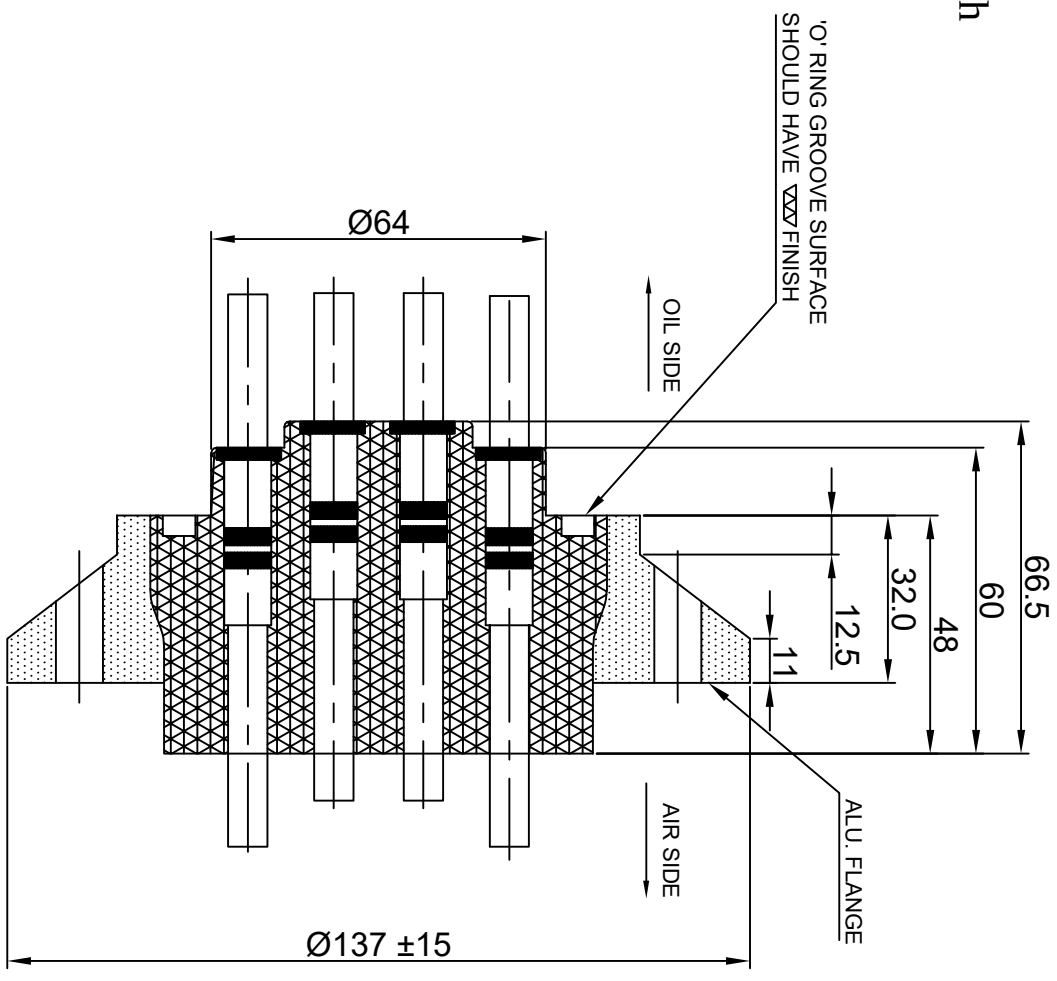


NOTE:-

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

For EPC Contracts Only

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



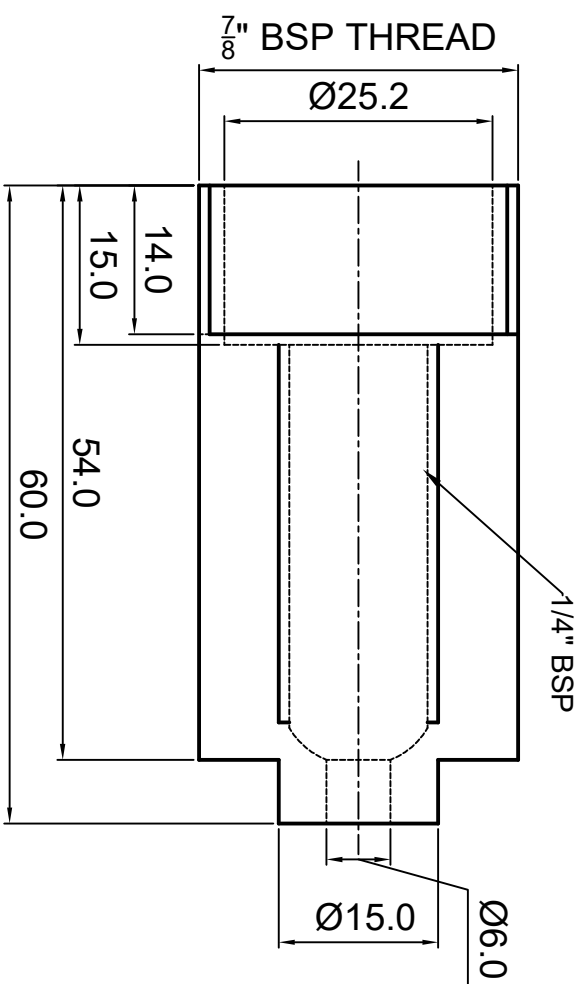
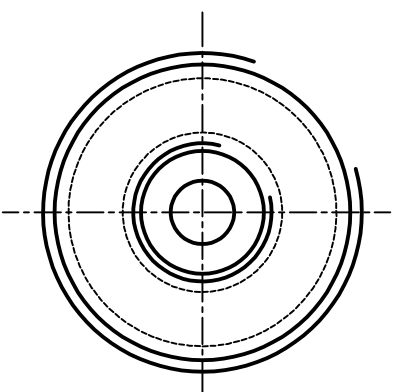
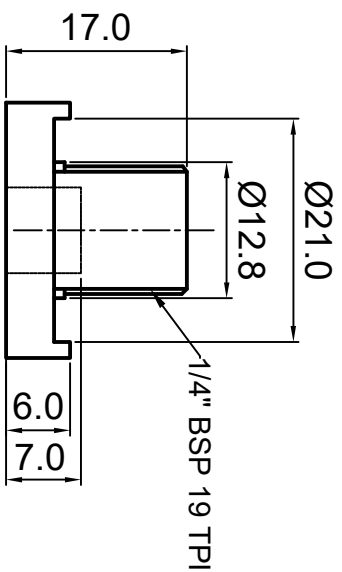
SECTION:A-A

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

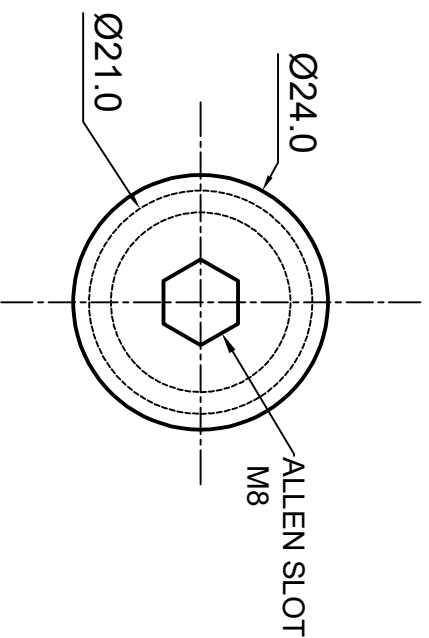
CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED			
PROJECT NAME : AS APPLICABLE			
UNLESS OTHERWISE SPECIFIED			
1. ALL DIMENSIONS ARE IN mm.			
2. TOLERANCE WHEREVER NOT INDICATED ±5%			
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL
DGN	26.02.2024	SPS	EPOXY
DRN	26.02.2024	AKASH	
CHD	26.02.2024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

Chief Engineer	
Projects	
REV.	DATED
R0	26.02.2024
FOR APPROVAL	
REVISION DESCRIPTION	

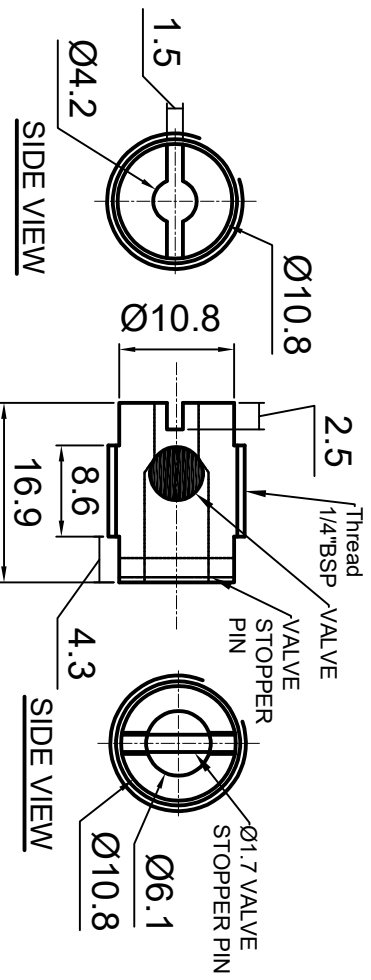
Ground clearance of 8000 mm shall be maintained during erection. Plinth height of 300 mm shall be maintained



SR.NO	DISCRPTION	MATERIAL
1	NRV (1/4" BSP)	M.S(HDG)/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	M.S(HDG)

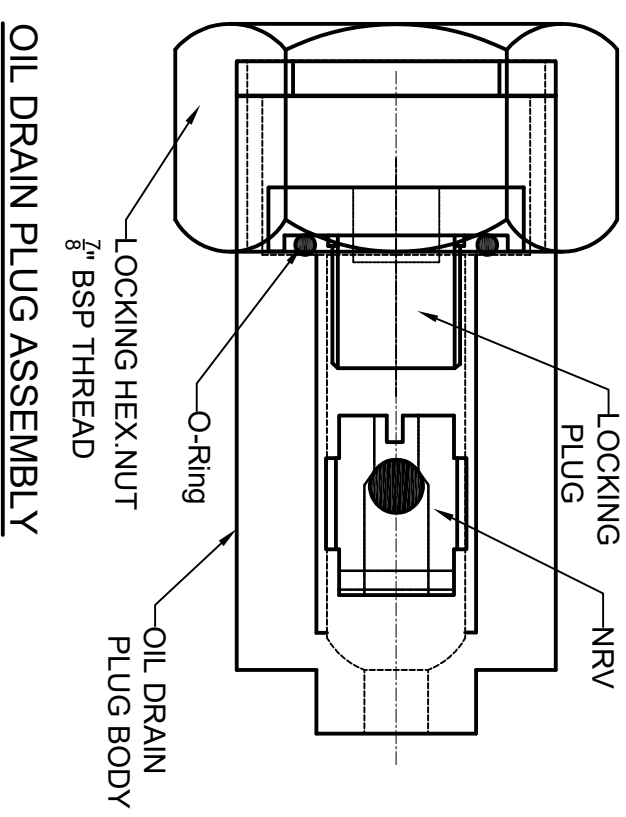


LOCKING PLUG DETAILS



NRV : DETAILS

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



OIL DRAIN PLUG ASSEMBLY

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

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

UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL
1. ALL DIMENSIONS ARE IN mm.	26.02.2024	SPS	SEE TABLE
2. TOLERANCE WHEREVER NOT INDICATED ±5%	26.02.2024	AKASH	
	26.02.2024	BLS	

For EPC Contracts Only

Chief Engineer
Projects

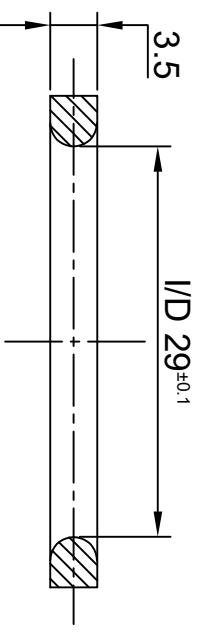
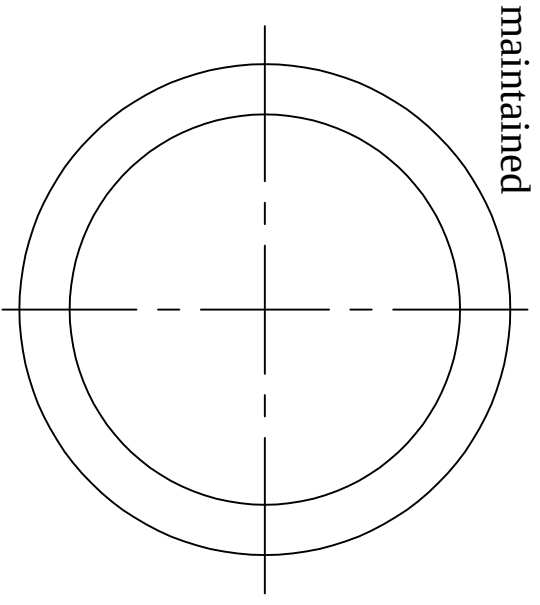
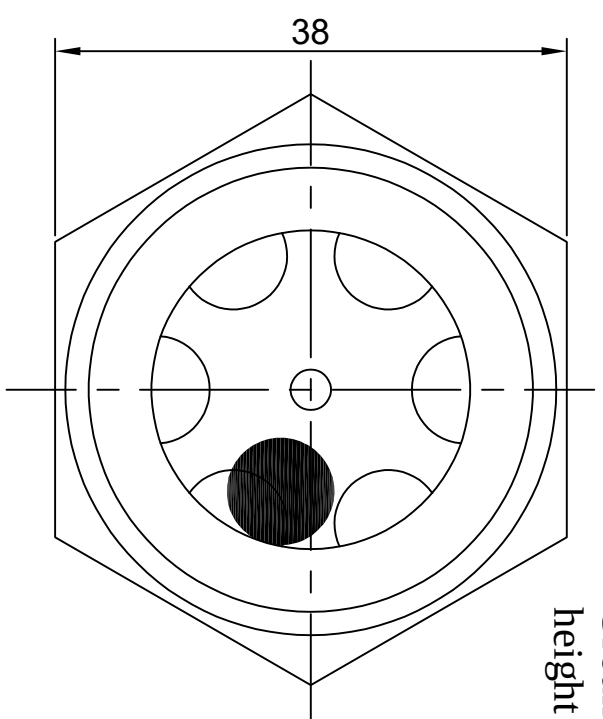
REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

TITLE : OIL DRAIN PLUG DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT

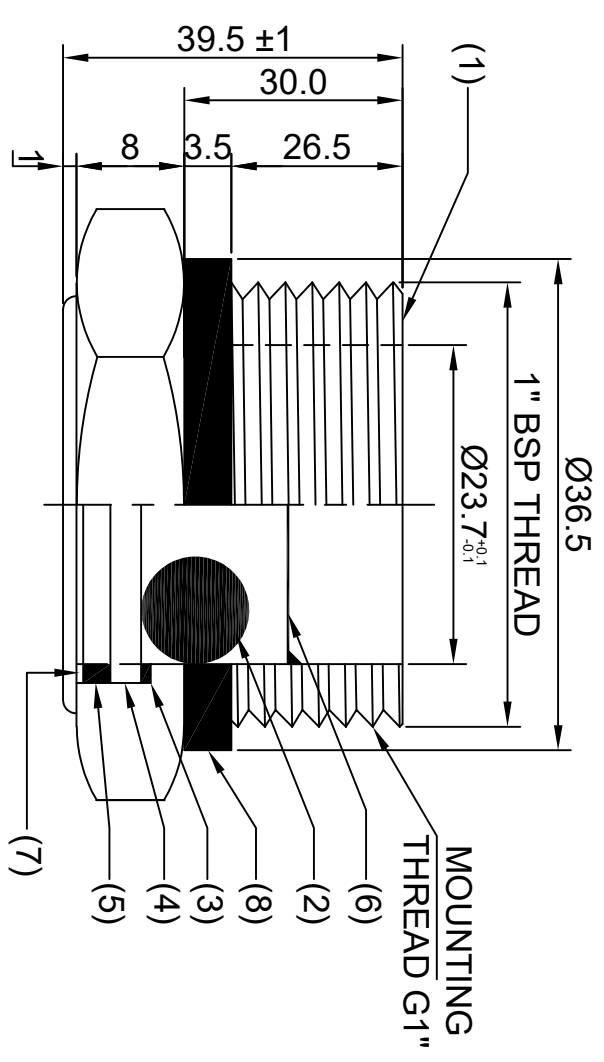
MEHRU MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.

DRG.NO ME-400CT-ODP-01

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



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/ALUMINIUM
08	1	MOUNTING FLAT RING	NITRILE BUTADIENE RUBBER

Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/VT/CVT requirement and compatibility.

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

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

For EPC Contracts Only

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

Chief Engineer
Projects

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

UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL
1. ALL DIMENSIONS ARE IN mm.	26.02.2024	SPS	SEE TABLE
2. TOLERANCE WHEREVER NOT INDICATED ±5%	26.02.2024	AKASH	
	26.02.2024	BLS	

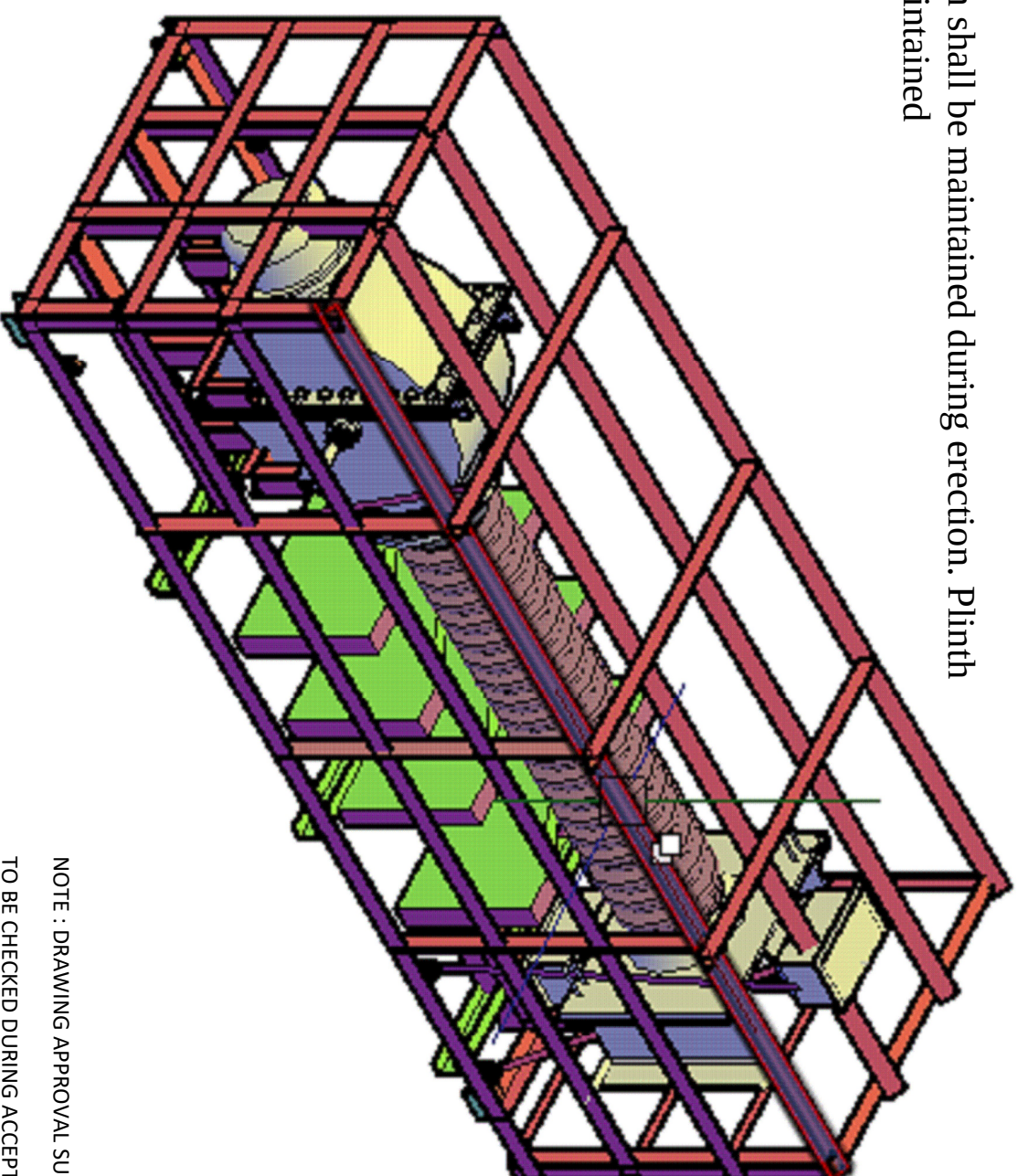
TITLE : OIL LEVEL INDICATOR DRAWING FOR 400KV CURRENT TRANSFORMER RATIO : 500-1000-2000-3000/1A,5C BAR TYPE CT

MEHRU MECHANICAL ENGINEERS (P) LTD.

MEHRU

DRG.NO ME-400CT-OL-01

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



For EPC Contracts Only

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

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

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

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

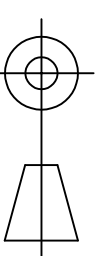
CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
 PROJECT NAME : AS APPLICABLE

UNLESS OTHERWISE SPECIFIED
 1. ALL DIMENSIONS ARE IN mm.
 2. TOLERANCE WHEREVER NOT INDICATED ±5%

DATE	NAME	MATERIAL
26.02.2024	SPS	
26.02.2024	AKASH	
26.02.2024	BLS	

SCALE: N T S

MEHRU
 MEHRU ELECTRICAL &
 MECHANICAL
 ENGINEERS (P) LTD.



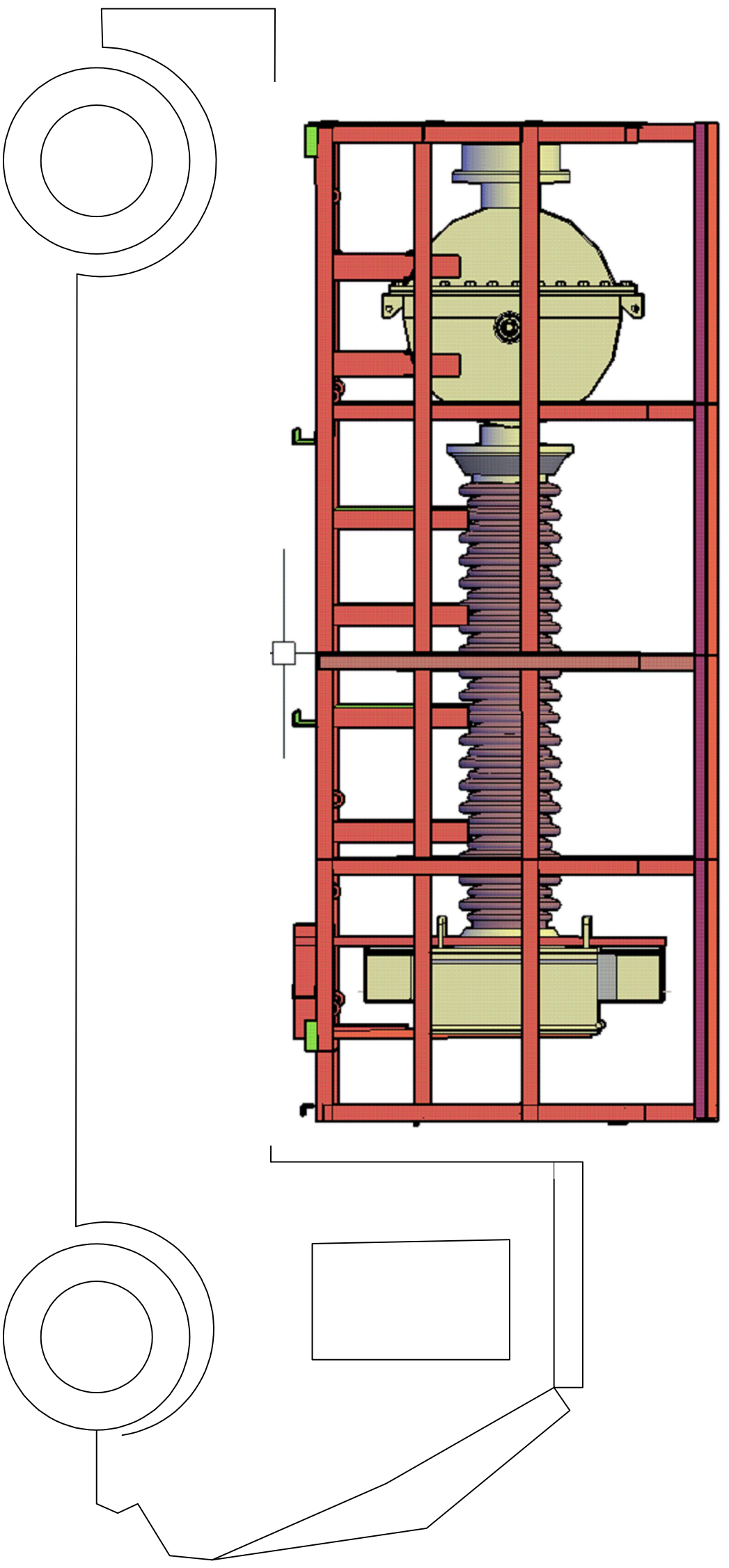
Chief Engineer
 Projects

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	26.02.2024

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

DRG.NO
 ME-400CT-PACKING-01

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



For EPC Contracts Only

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

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

Chief Engineer
Projects

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.	DATE	NAME	MATERIAL
DRN.	26.02.2024	SPS	
CHD.	26.02.2024	AKASH	
SCALE:	N T S	BLS	
TITLE : LOADING 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-LOADING-01			

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

Ref: - ME/420CT/GTP/02/Higher-R0

GTP FOR 400 kV CURRENT TRANSFORMER

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

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
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				

For EPC Contracts Only

Chief Engineer
Projects

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.

TO BE CHECKED DURING ACCEPTANCE TESTS.

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

20	Maximum exciting current at Vk		For Core - I,II, IV & V
	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 $1.1 \cdot U_m / \sqrt{3}$ at 1.0 MHz	:	<1000 μ V
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)	:	13020 (min.) , i.e 31 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)		
	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)	:	35×10^{12} (min.)
	ii. At 27C (ohm-cm)	:	1500×10^{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

For EPC Contracts Only

**Chief Engineer
Projects**

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.

TO BE CHECKED DURING ACCEPTANCE TESTS.

For EPC Contracts Only

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	:	Aluminum
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 enclose	:	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 Tandelata from 10kV to Um/√3	:	<15%

Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with CT/IVT/CVT requirement and compatibility.



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

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS.

TO BE CHECKED DURING ACCEPTANCE TESTS.

Chief Engineer
Projects