

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



Ground clearance of 8000 mm shall be maintained from Plinth level during erection.

FOR EPC CONTRACTS ONLY

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED, VIJAYAWADA
 CONTRACTOR :
 PO NO. :
 PROJECT : Drawing approval subject to valid vendor registration

Suitable Clamps/Connectors in the scope of the EPC contractor

LIST OF DRAWINGS BEING SUBMITTED FOR 400 kV C.T (TYPE OSKF-420) CT RATIO: 500-1000-2000-3000/1-1-1-1-1A		
SL	DRAWING NUMBER	DESCRIPTION OF DRAWING
01	GTP Rev:00	GUARANTEED TECHNICAL PARTICULARS
02	411-B-10906 Rev:00	OUTLINE DIAGRAM
03	431-B-6906 Rev:00	RATING & CONNECTION PLATE
04	411-B-10907 Rev:00	SECTIONAL VIEW
05	422-B-5548 Rev:00	DETAIL OF SEC TERMINAL BOX

Note: Drawing Approval subject to valid type test reports to be checked during acceptance tests

Chief Engineer

Planning & Power Systems

APTransco

APPROVED:

PREPARED:

CHECKED:

RAGHUL

SANGITH

MAYANK

27.01.2022

27.01.2022

27.01.2022

ISO : -----

CONTENTS OF THE DRAWING SHALL NOT BE MODIFIED WITHOUT PRIOR INTIMATION TO GE. REQUIRED CHANGES, IF ANY, SHALL BE HIGHLIGHTED OR MARKED AND COMMUNICATED TO GE FOR NECESSARY ACTION

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5645379/2022/EEMRT-ENE51
 NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE
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GUARANTEED TECHNICAL PARTICULARS FOR CURRENT TRANSFORMER		
420kV CT RATIO - 500-1000-2000-3000/1-1-1-1-1A		
Sr. No.	Description	Technical Parameters
1	Manufacturer	GE T&D INDIA LIMITED, INDIA
2	CT Type	OSKF 420
3	Design	Live Head-type, Oil filled ,Out door & Hermatically sealed
4	Max. Systems Voltage	420 kV
5	Nominal Systems Voltage	400 kV
6	Nominal Frequency	50 Hz
7	Lightning Impulse Withstand Voltage 1.2/50µS	1425 kV
8	Power Frequency Withstand Voltage (1 min)	630 kV
9	Switching Impulse Withstand Voltage - 250/2500µS (Wet)	1050 kV
10	Insulator	Porcelain
11	Nominal Creepage Distance	13,020 mm
12	Color of Insulator	Brown
13	Standard applicable	IEC-61869-1&2
14	Rated Primary Current (contin.)	3000 A
15	Rated Primary Current (extended)	120% FOR 3000/1, 180% FOR 2000/1 AND 200% AT LOWER RATIO
16	Power Frequency Withstand Voltage between Secondary & Earth	5 kV for 1 min.
17	No. of Cores	5
18	Ratio	500-1000-2000-3000/1-1-1-1-1 A
19	Core Data (Burden & Accuracy Classes)	
	Core 1	PX (Vkp: 500-1000-2000-3000 V; Rct: 2.5-5-10-15 Ω; Iexc: 120-60-30-20 mA)
	Core 2	PX (Vkp: 500-1000-2000-3000 V; Rct: 2.5-5-10-15 Ω; Iexc: 120-60-30-20 mA)
	Core 3	20VA, 0.2S, ISF ≤ 5
	Core 4	PX (Vkp: 500-1000-2000-3000 V; Rct: 2.5-5-10-15 Ω; Iexc: 120-60-30-20 mA)
20	Rated Short Time Thermal Current	50 kA / 1 sec.
21	Rated Short Time Dynamic Current	125 kAp
22	Radio Interference Voltage at 1.1 Ur/√3 at 1.0 Mhz	≤1000µV
23	Partial discharge level	10pC at Um, 5pC at 1.2 Um/√3 (Max)
24	Oil Standard (EHV Grade)	IEC 60296
25	Oil Quantity	315 Kgs
26	Oil Type	Mineral Oil
27	Dimensional details	
	a) Overall height from mounting plane (mm)	5340±150
	b) Height up to terminals from mounting plane (mm)	4400±100
	c) Mounting dimensions and diameter of mounting holes (mm)	555±10 x 555±10 (Hole to Hole); Mounting hole Ø28 x 4 nos
	d) Terminal pad dimensions (mm)	200 x 150 x 22 Thick
e) Material of primary terminal	Aluminium	
28	Details of Insulator	
	Make	BHEL/IEC/MODERN
	Type	Hollow
	Height (mm)	3580±10
	Inner diameter (mm)	250±5
	Cantilever strength	5 kN (min)
29	Seismic accelartion	0.3g
30	Corona Extinction Voltage	320 (max)
31	Similar equipment type tested within the last 2 years	Yes
32	Transportation postion	Horizontal only
33	Overall general dimension drawing	Refer Outline Drawing
34	Total equipment weight	1300kg
35	Tan delta	<0.005, As per IEC 61869-1&2

Chief Engineer

Planning & Power Systems

APTransco

PRPD
 Raghul
 27.01.2022

CHECKED
 Sangith. R
 27.01.2022

APPRD
 Mayank
 27.01.2022

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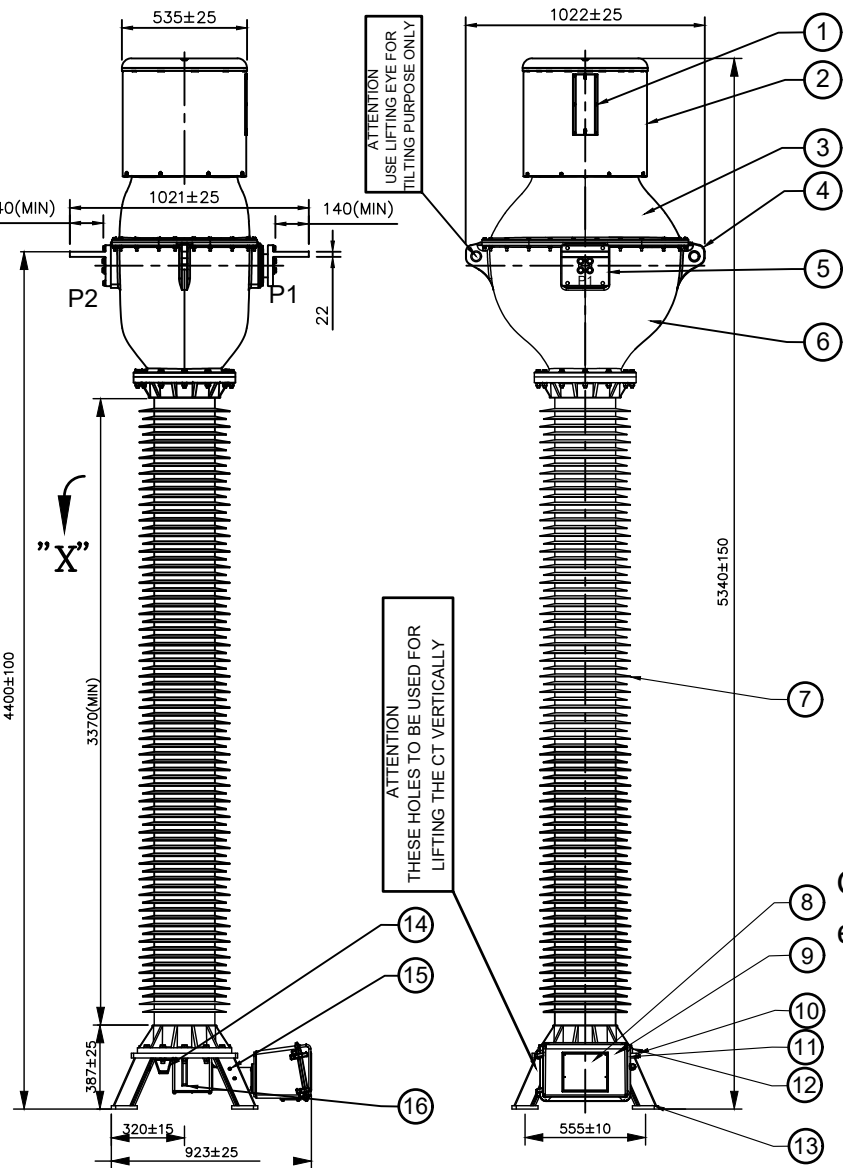
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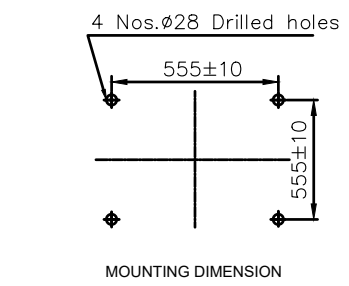
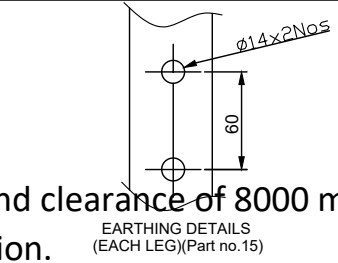
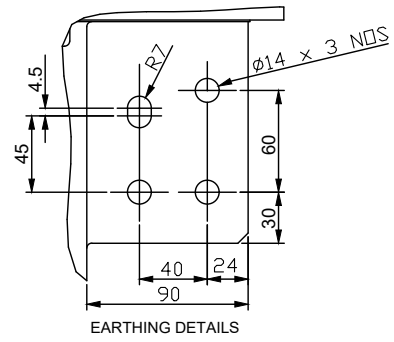
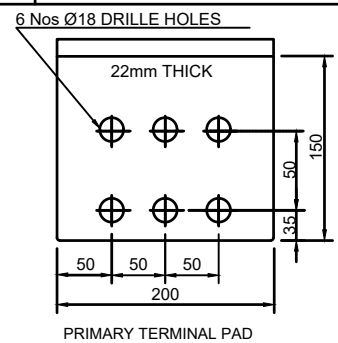
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Suitable Clamps/Connectors in the scope of the EPC contractor



CAUTION:-WHEN SHIPPED IN THE TILTED POSITION OR HORIZONTALLY,
TILT THE TRANSFORMER ONLY IN THE DIRECTION OF ARROW-"X"



IT.No.	DESCRIPTION	MATERIAL	18 Y
1	BELLOW INDICATOR	POLYCARBONATE	01
2	BELLOW WITH COVER	S.S & AI	01
3	TANK COVER	ALUMINIUM ALLOY	01
4	TANK LIFTING EYE	ALUMINIUM ALLOY	02
5	PRIMARY TERMINAL PAD	ALUMINIUM	01
6	TANK	ALUMINIUM ALLOY	01
7	INSULATOR	PORCELAIN	01
8	RATING & SCHEMATIC PLATE	STAINLESS STEEL	01
9	SEC. TERMINAL BOX COVER & CABLE GLAND PLATE	ALUMINIUM ALLOY	01
10	BASE PLATE	ALUMINIUM ALLOY	01
11	OIL DRAIN DEVICE	BRASS	01
12	BASE LIFTING HOLE	M.S HDG	04
13	BASE PEDESTAL	M.S HDG	01
14	L.V. BUSHING	COPPER/EPOXY	01
15	EARTHING DETAIL (LEG)	M.S HDG	04
16	EARTHING PAD	ALUMINIUM ALLOY	01
17	MOUNTING HARDWARES M24x100 HEX BOLT WITH NUT FLAT & SPRING WASHER	M.S HDG	04Set

NOTE :-
 01. NOMINAL CREEPAGE DISTANCE - 13,020 mm.
 02. TOTAL WEIGHT OF CT - 1300 Kgs (APPROX.)
 03. TOTAL SHIPPING WEIGHT - 1630 Kgs (APPROX.)
 04. MAKE OF INSULATOR - BHEL / IEC / MODERN
 05. GENERAL TOLERANCE WILL BE APPLICABLE AS PER ISO 2768 WHERE TOLERANCE IS NOT INDICATED
 06. MINOR MODIFICATION WITHOUT NOTICE
 07. ALL FERROUS PARTS SHALL BE HOT DIP GALVANIZED
 08. OIL COMPLIANCE STANDARD - IS : 335 / IEC : 60296

Ground clearance of 8000 mm shall be maintained from Plinth level during erection.

ELECTRICAL PARAMETERS :-

1. RATED SYSTEM VOLTAGE	: 400 kV
2. HIGHEST SYSTEM VOLTAGE	: 420 kV
3. APPLICABLE STANDARD	: IEC:61869-1&2
4. RATED PRIMARY CURRENT	: 3000 A
5. RATED EXTENDED PRIMARY CURRENT	: 120% FOR 3000/1, 180% FOR 2000/1 AND 200% AT LOWER RATIO
6. BASIC INSULATION LEVEL	: 420 kV/1050 kV(rms)/1425 kV(Peak)
7. SHORT TIME CURRENT	: 50kA FOR 1 Sec.
8. DYNAMIC CURRENT	: 125 kAp
9. RIV at 267 kV	: ≤1000 µV

CT RATIO: 500-1000-2000-3000/1-1-1-1-1A

REVISION NO.	DESCRIPTION

Chief Engineer
 Planning & Power Systems
 APTransco

Drawing approval subject to valid vendor registration

NAME	DATE
DRN. RAGHUL	27.01.2022
CHD. SANGITH	27.01.2022
APPD. MAYANK	27.01.2022

ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.	SCALE : NTS
OUTLINE DIAGRAM FOR 400 kV C.T (TYPE OSKF-420) (120 % EXTENDED PRIMARY CURRENT)	ISO : -----



GE T&D India Limited

DRG.No.
411-B-10906
Rev:00

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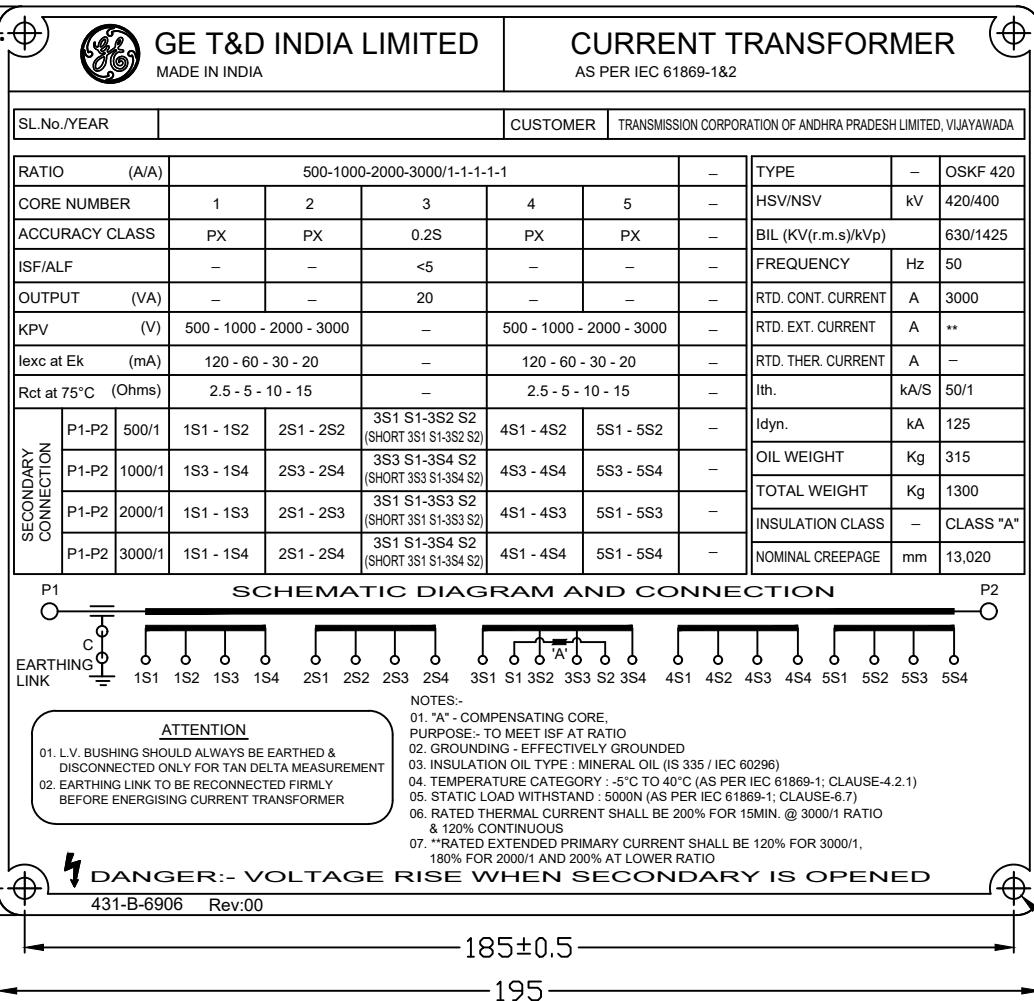
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Suitable Clamps/Connectors in the scope of the EPC contractor

170

160±0.5



Secondary winding shall be rated for continuous current of 2 Amps.

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431-B-6906 Rev:00

185±0.5

195

Ø4 X 4 HOLES

- NOTES:-
- OUTDOOR PROOF (MATERIAL : STAINLESS STEEL - 0.5 mm THICK)

CT RATIO: 500-1000-2000-3000/1-1-1-1-1A

NO.	REVISION	DESCRIPTION
		Chief Engineer
		Planning & Power Systems
		APTransco

NAME	DATE	ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.	SCALE : NTS
DRN. RAGHUL	27.01.2022	RATING & CONNECTION PLATE FOR 400 kV C.T (TYPE OSKF-420) (120 % EXTENDED PRIMARY CURRENT)	ISO : -----
CHD. SANGITH	27.01.2022		
APPD. MAYANK	27.01.2022		DRG.No. 431-B-6906
GE T&D India Limited			Rev:00

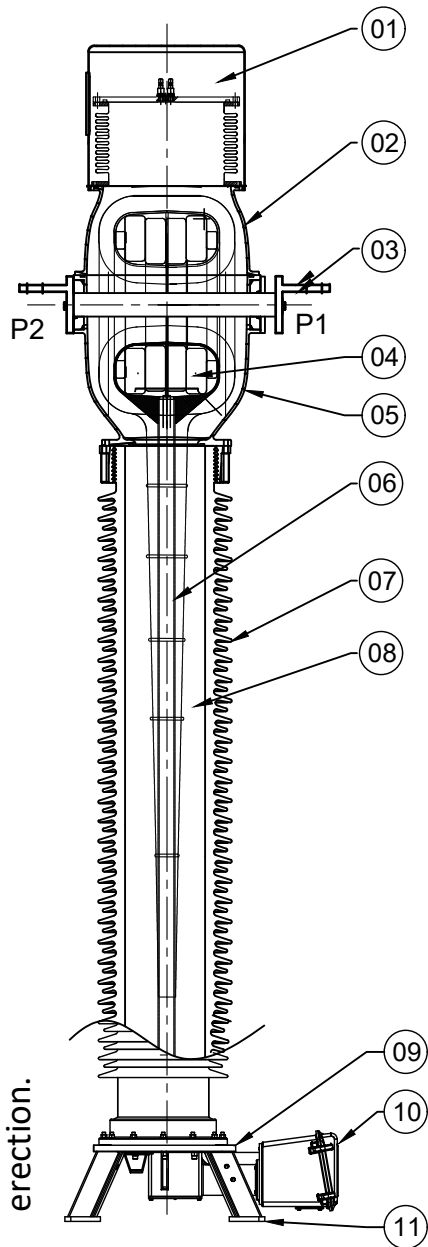
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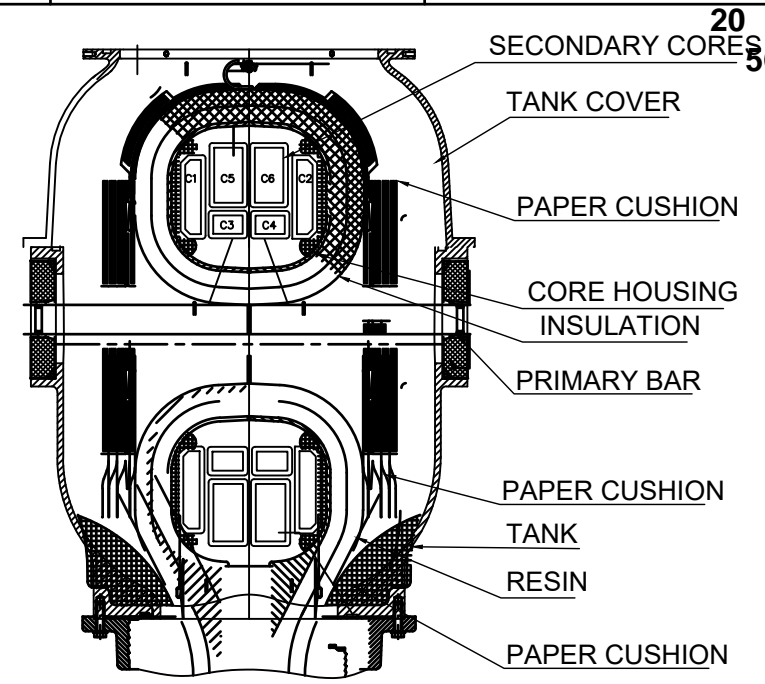
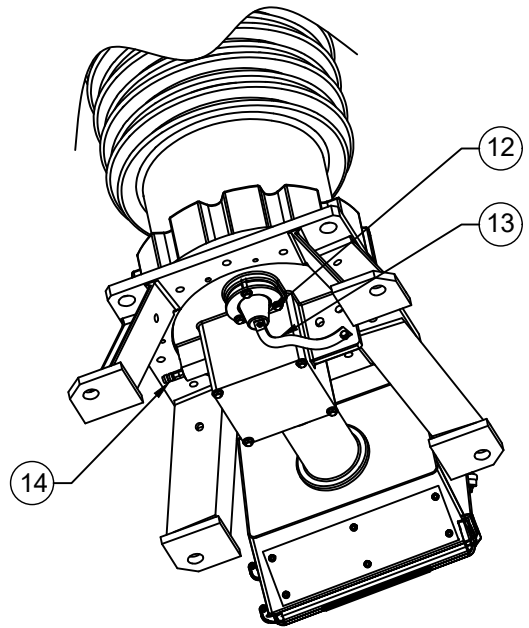
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IT.No.	DESCRIPTION	MATERIAL
01	BELLOW WITH COVER	SS WITH ALUMINIUM
02	TANK COVER	ALUMINIUM ALLOY
03	PRIMARY TERMINAL PAD	ALUMINIUM
04	SECONDARY CORES	CRGO/SPL ALLOY
05	TANK	ALUMINIUM ALLOY
06	ACTIVE PART	PAPER
07	INSULATOR	PORCELAIN
08	OIL	MINERAL OIL
09	BASE PLATE	ALUMINIUM ALLOY
10	SEC.TERMINAL BOX	ALUMINIUM ALLOY
11	BASE CHANNEL	MS HDG
12	L.V. BUSHING FOR TAN DELTA & CAPACITANCE MEASUREMENT	EPOXY WITH COPPER TERMINAL
13	EARTHING LINK FOR LV BUSHING	COPPER
14	OIL DRAIN DEVICE	BRASS



TYPICAL VIEW OF CORE, CORE BOX
PRIMARY BAR & TANK, TANK COVER

PRIMARY WINDING DETAILS :-

NO. OF PRIMARY TURN : ONE
PRIMARY CONDUCTOR MATERIAL : ALUMINIUM
CROSS SECTIONAL AREA : 4900 Sq.mm

SECONDARY WINDING DETAILS :-

NO. OF SECONDARY TURNS : 3000
SEC. CONDUCTOR MATERIAL : SUPER ENAMELLED COPPER WIRE
CROSS SECTIONAL AREA : 19 SWG - 14 SWG

CT RATIO: 500-1000-2000-3000/1-1-1-1-1A

NO	REVISION	DESCRIPTION

Chief Engineer
Planning & Power Systems
APTransco

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NAME	DATE	ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.	SCALE : NTS
DRN. RAGHUL	27.01.2022	SECTIONAL VIEW FOR 400 kV C.T (TYPE OSKF-420) (120 % EXTENDED PRIMARY CURRENT)	ISO : -----
CHD. SANGITH	27.01.2022		
APPD. MAYANK	27.01.2022		

GE T&D India Limited

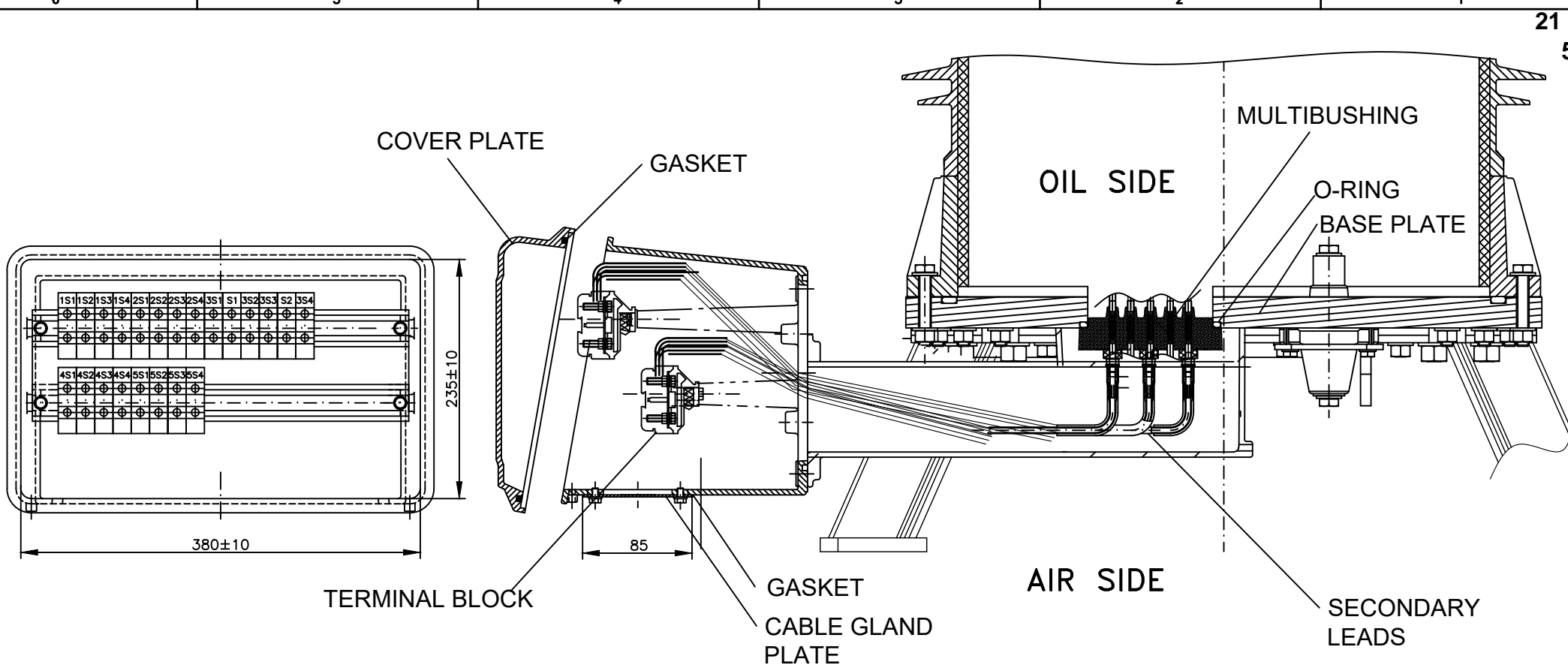
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Rev:00

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LEGEND:

- M5 STUD TYPE SECONDARY TERMINAL OF 1100V GRADE WITH NECESSARY SHORTING LINK SHALL BE PROVIDED MAKE : ELMEX / CONNECTWELL
- GASKET (TYPE: NBR/EPDM)
- CABLE ENTRY ALUMINUM PLATE (320x105x4)

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NOTE:

- TERMINAL BOX CONFIRMS TO IP:56 DEGREE PROTECTION AS PER IS/IEC 60947-1:2004
- 5 Nos.3/4" DOUBLE COMPRESSION CABLE GLANDS IN THE SCOPE OF GE SUPPLY.

Chief Engineer Planning & Power Systems APTransco		CT RATIO: 500-1000-2000-3000/1-1-1-1-1A		ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.	SCALE : NTS
		DRN.	RAGHUL	27.01.2022	DETAILED VIEW OF SEC. TERMINAL BOX FOR 400 kV C.T (TYPE OSKF-420) (120 % EXTENDED PRIMARY CURRENT)
CHD.	SANGITH	27.01.2022			
APPD.	MAYANK	27.01.2022			
GE T&D India Limited		DRG.No. 422-B-5548			Rev:00

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