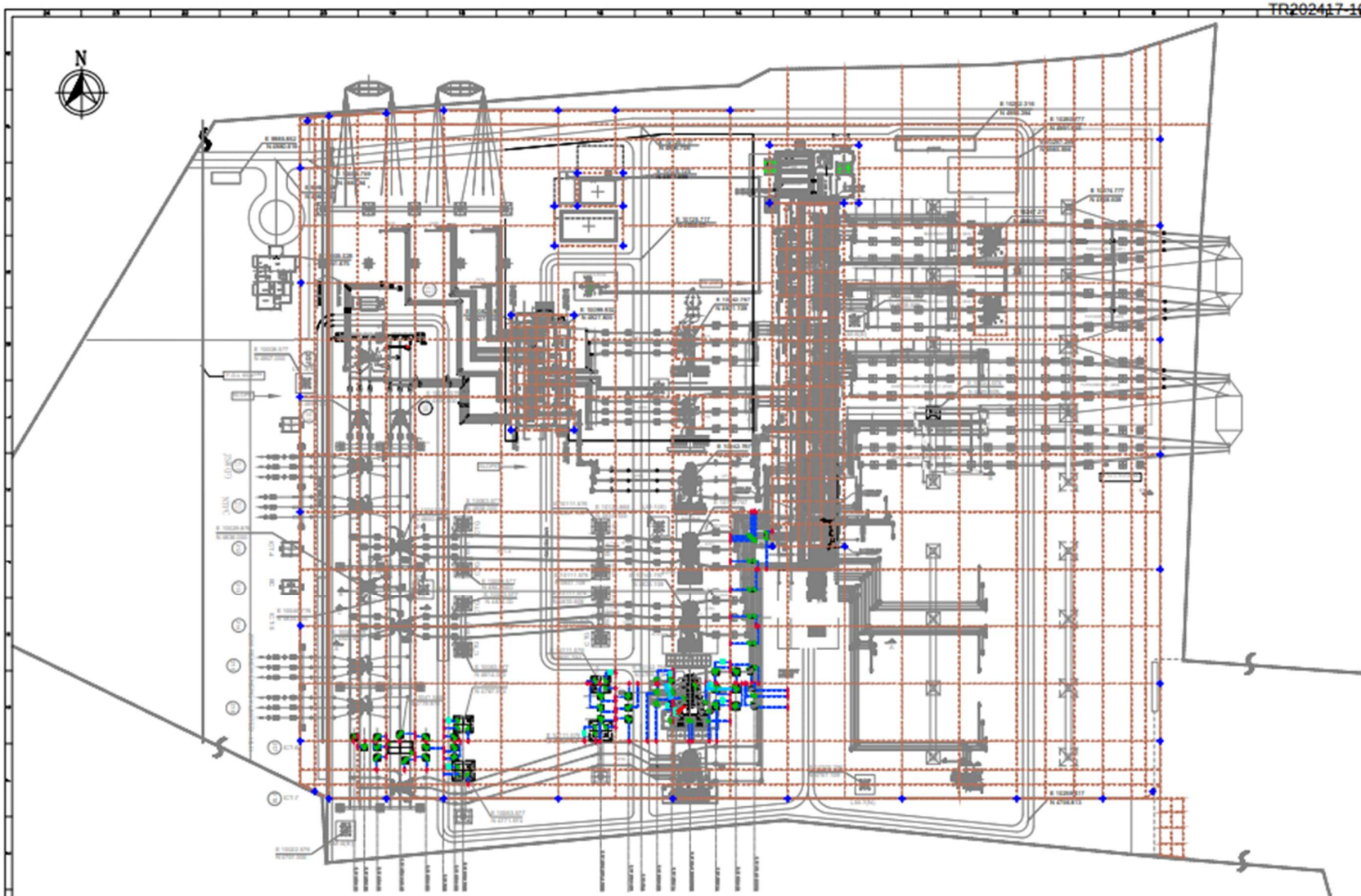
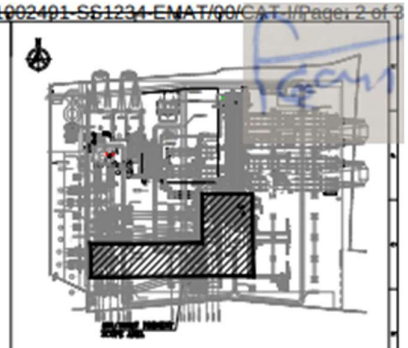




SITE PLAN

LEGEND:-

- ——— – CENTER LINE
- ——— – PRESENT SCOPE
- ——— – EXISTING SCOPE
- ——— – FUTURE SCOPE
- NO. – NUMBER
- PL. – PLATE
- ℄ – CENTER LINE
- FGL – FINISHED GROUND LEVEL
- NTS – NOT TO SCALE
- TYP – TYPICAL
- FL – FLOOR LEVEL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS & CO-ORDINATES ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. TWO DIFFERENT MODES OF ONE STRUCTURE/EQUIPMENT SHALL BE CONNECT TO DIFFERENT CONDUCTORS OF MAIN EARTHING/LOOP MAIN RING TO THE EQUIPMENT/STRUCTURE.
3. EARTHING CONNECTIONS TO EQUIPMENT TERMINALS SHALL BE OF BOLTED TYPE.
4. EARTHING CONDUCTORS AROUND THE BUILDING SHALL BE BURIED AT AT MINIMUM DISTANCE OF 1000mm FROM THE OUTER BOUNDARY OF THE BUILDING.
5. MINIMUM DISTANCE OF 600mm SHALL BE MAINTAINED BETWEEN ELECTRODES.
6. WHEREVER EARTHING CONDUCTOR CROSSES CABLE TRENCHES, UNDERGROUND SERVICE DUCTS, PIPES, TRANSOM/RAILWAY TRACKS ETC., IT SHALL BE LAID MINIMUM 300 MM BELOW THEM AND SHALL BE CONCRETED IN CASE IT FOLLOW NON-EQUIPMENT/STRUCTURE FOUNDATIONS.
7. EARTHING CONDUCTORS OR LEADS ALONG THEM RUN ON CABLE TRENCH, LADDER, WALLS ETC. SHALL BE SUPPORTED AT SUITABLE INTERVALS/SPACING AT INTERVALS OF 750 MM. WHEREVER IT PASSES THROUGH WALLS, FLOORS ETC., PVC SLEEVES SHALL BE PROVIDED FOR THE PASSAGE OF THE PASSAGE OF THE CONDUCTOR AND BOTH ENDS OF THE SLEEVE SHALL BE SEALED TO PREVENT THE PASSAGE OF WATER THROUGH THE SLEEVES.
8. EARTHING CONDUCTORS CROSSING THE ROAD SHALL BE LAID MINIMUM BELOW ROAD 600 MM AT MINIMUM DEPTH TO SUIT THE SITE CONDITIONS.
9. EARTHING CONDUCTORS EMBEDDED IN THE CONCRETE SHALL HAVE APPROXIMATELY 50MM CONCRETE COVER.
10. FLEXIBLE EARTHING CONNECTORS SHALL BE PROVIDED FOR THE MOVING PARTS.
11. 50MM X 6MM MS FLAT SHALL RUN ON THE TOP TIER AND ALL ALONG THE CABLE TRENCHES AND THE SAME SHALL BE WELDED TO EACH OF THE RACKS. FURTHER THIS FLAT SHALL BE EARTHED AT BOTH ENDS AND AT AN INTERVAL OF 20MTRS. THE M.S. FLAT SHALL BE FINALLY PAINTED WITH TWO COATS OF RED OXIDE PRIMER AND TWO COATS OF ZINC RICHED ENAMEL PAINT.
12. "CONNECTION BETWEEN EQUIPMENT EARTHING LEAD AND MAIN EARTHING CONDUCTORS AND BETWEEN MAIN EARTHING CONDUCTORS SHALL BE WELDED TYPE. FOR RUST PROTECTION, THE WELDS SHOULD BE PAINTED WITH RED OXIDE PRIMER AND AFTERWARDS COATED WITH TWO LAYERS BITUMEN COMPOUND TO PREVENT CORROSION"
13. ALL GROUND CONNECTIONS SHALL BE MADE BY ELECTRIC ARC WELDING. ALL WELDED JOINTS SHALL BE ALIGNED TO COIL STEEL GRADUALLY TO ATMOSPHERIC TEMPERATURE BEFORE PUTTING ANY LOAD ON IT. ARTIFICIAL COOLING SHALL NOT BE ALLOWED.
14. ALL ARE WELDED WITH LARGE DIA. CONNECTORS SHALL BE DONE WITH LOW-HYDROGEN CURRENT ELECTRODES
15. "EARTHING TERMINAL OF EACH LIGHTNING ARRESTER & CAPACITOR VOLTAGE TRANSFORMER SHALL BE DIRECTLY CONNECTED TO ROD EARTH ELECTRODE WHICH IN TURN, SHALL BE CONNECTED TO STATION EARTHING GRID."
16. EARTHING SYSTEM INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH CODE OF PRACTICE FOR EARTHING IS:3043 UNLESS OTHERWISE SPECIFIED IN THE TECHNICAL SPECIFICATION.
17. "AP-CONNECTIONS FROM THE EARTHING GRID TO THE EQUIPMENT/STRUCTURE TO BE EARTHED SHALL BE TERMINATED ON THE EARTHING TERMINALS OF THE EQUIPMENT/STRUCTURE AS PER "STANDARD EARTHING DETAILS "SPD NO. CC06/STD/EARTHING/00"
18. DRAWINGS FOR BUILDING LIGHTNING PROTECTION SHALL BE PROVIDED SEPARATELY.
19. FOR DETAILS OF EARTHING OF ALL THE EQUIPMENT/STRUCTURE, PLEASE REFER TO INSTRUMENT SECTION.

REFERENCE DRAWINGS:-

S. No.	DRAWING/DOCUMENT TITLE	DRAWING/DOCUMENT No.
1.	EXTENSION OF HYOSUNG TUTICORIN-II GIS SS ELECTRICAL LAYOUT PLAN & SECTION	H-2573-EPC-S-01
2.	EXTENSION OF HYOSUNG TUTICORIN-II GIS SS CONTROL CHAMBER LAYOUT	H-2573-EPC-C-01

EXISTING QUANTITY:

S. NO.	SYMBOL	DESCRIPTION	UNIT	QUANTITY	STATUS
01		EXISTING MAIN EARTH MAT 40mm MS ROD	MTR.	---	LIST
02		EARTH MAT RISER 40mm MS ROD	MTR.	1100M	
03		50 x 6 mm MS FLAT	MTR.	400	
04		50 x 6 mm MS FLAT (FOR OUTDOOR CABLE TRENCH)	MTR.	100M	
05		75 x 12mm MS FLAT	MTR.	1220M	
06		ROD ELECTRODE	NOS.	10	
07		PIPE ELECTRODE	NOS.	02	
08		EXISTING ROD ELECTRODE (PERIPHERAL)	NOS.	-	

REV. NO.	REVISED DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPROVED
0	01.10.20	ISSUED FOR APPROVAL	M	SL/BS	CS	DB

REVISIONS

CLIENT: POWER GRID CORPORATION OF INDIA LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)

SUPPLIER/CONTRACTOR: HYOSUNG (INDIA PVT. LTD.)

PROJECT: GIS SUBSTATION EXTENSION PACKAGE-GIS 12S -"AUGMENTATION OF TRANSFORMATION CAPACITY AT 400/220kV TUTICORIN-II GIS PS IN TAMIL NADU BY 500MVA, 400/220kV ICT (4th) TO MEET N-1 RELIABILITY OF RE POOLING STATION".

PACKAGE: EXTENSION OF 400/220kV TUTICORIN-II GIS PS SUBSTATION

JOB No.	NAME	SIGN	DATE
DRN	M		01.10.20
DSN	SL/BS		01.10.20
CHD	CS		01.10.20
APR	DB		01.10.20

TITLE: EXTENSION OF 400/220kV TUTICORIN-II GIS S/S OUTDOOR EARTHING LAYOUT

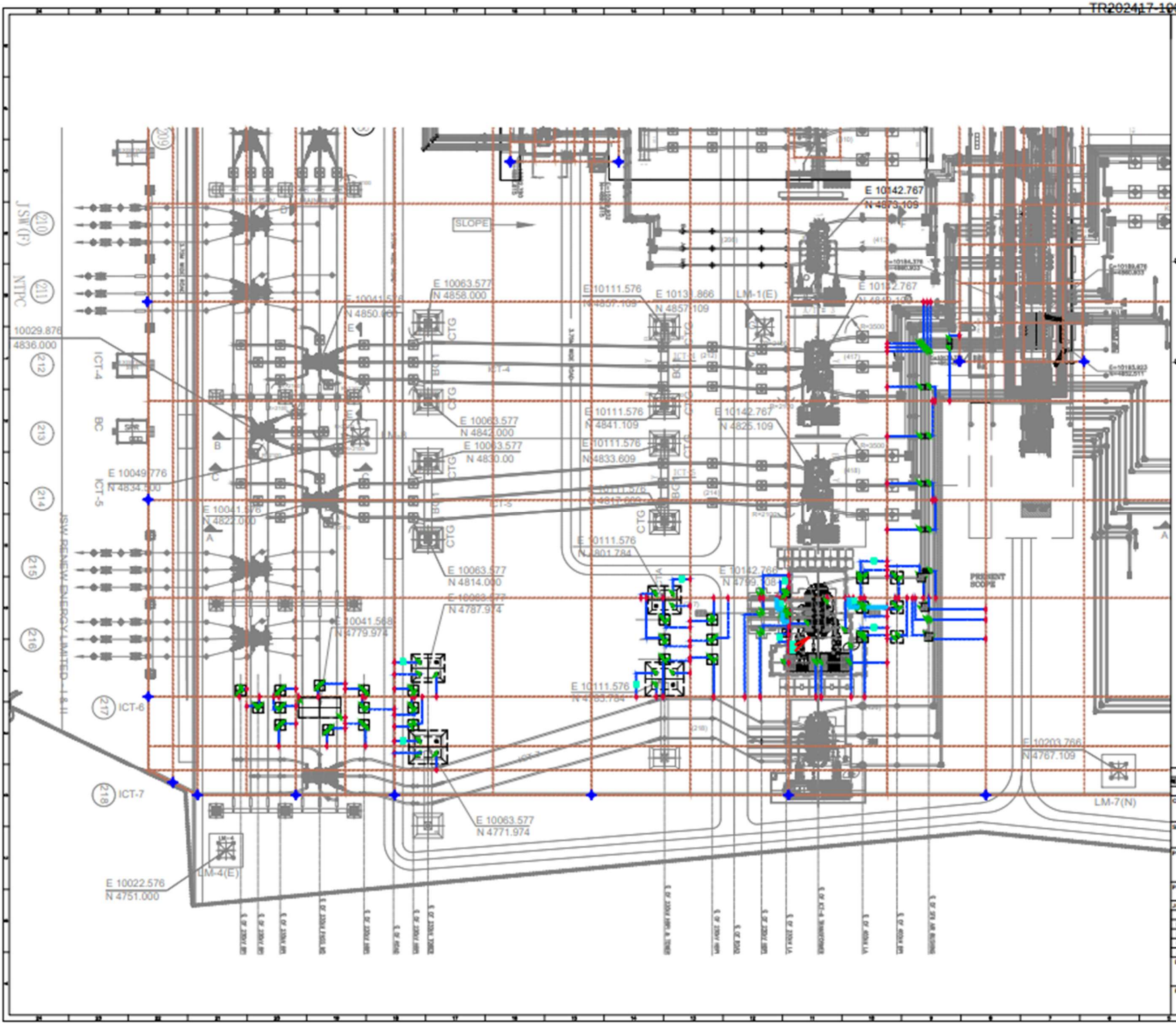
SCALE: 1:500

PROJECTION

DRG. No.: 8I-PS8078E-EPC-D-0B

SHEET: 1 OF 2 | SIZE: A0 | REV.: 0

RELEASED FOR: ☐ PRELIMINARY ☐ TENDER ☐ INFORMATION ☑ APPROVAL ☐ CONSTRUCTION



SITE PLAN

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS & CO-ORDINATES ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. TWO DIFFERENT PARTS OF ONE STRUCTURE/EQUIPMENT SHALL BE CONNECT TO DIFFERENT CONDUCTORS OF THE EARTHING GRID BY MEAN OF THE EQUIPMENT/STRUCTURE.
3. EARTHING CONNECTING TO EQUIPMENT TERMINALS SHALL BE OF BOLTED TYPE.
4. EARTHING CONDUCTOR AROUND THE BUILDING SHALL BE BURIED AT AT MINIMUM DISTANCE OF 1000mm FROM THE OUTER BOUNDARY OF THE BUILDING.
5. MINIMUM DISTANCE OF 600mm SHALL BE MAINTAINED BETWEEN ELECTRODES.
6. THROUGH EARTHING CONDUCTOR CROSSES CABLE TRENCHES, UNDERGROUND SERVICE DUCTS, PIPES, TRANSOM/MAINT TRACKS ETC., IT SHALL BE LAID MINIMUM 200 MM BELOW THEM AND SHALL BE UNCOMPRESSED IN CASE IT FOULS WITH EQUIPMENT/STRUCTURE FOUNDATIONS.
7. EARTHING CONDUCTORS ON LEVEL ALONG THEM RUN ON CABLE TRENCH, LADDER, WALLS ETC. SHALL BE SUPPORTED BY SUITABLE WELDING/COATING AT INTERVALS OF 700 MM. WHENEVER IT PASSES THROUGH WALLS, FLOORS ETC., PVC SLEEVES SHALL BE PROVIDED FOR THE PASSAGE OF THE PASSAGE OF THE CONDUCTOR AND BOTH ENDS OF THE SLEEVE SHALL BE SEALED TO PREVENT THE PASSAGE OF WATER THROUGH THE SLEEVES.
8. EARTHING CONDUCTORS CROSSING THE ROAD SHALL BE LAID 2000 BELOW ROAD OR AT GREATER DEPTH TO SUIT THE SITE CONDITIONS.
9. EARTHING CONDUCTORS EMBEDDED IN THE CONCRETE SHALL HAVE APPROXIMATELY 50MM CONCRETE COVER.
10. FLEXIBLE EARTHING CONNECTIONS SHALL BE PROVIDED FOR THE MOVING PARTS.
11. 50MM X 6MM MS FLAT SHALL RUN ON THE TOP TRAY AND ALL ALONG THE CABLE TRENCHES AND THE SAME SHALL BE WELDED TO EACH OF THE PIECES. FURTHER THIS FLAT SHALL BE EARTHED AT BOTH ENDS AND AT AN INTERVAL OF 20MTRS. THE G.I. FLAT SHALL BE FINALLY PAINTED WITH TWO COATS OF RED OXIDE PRIMER AND TWO COATS OF ZINC RICH ENAMEL PAINT.
12. "CONNECTION BETWEEN EQUIPMENT EARTHING LEAD AND MAIN EARTHING CONDUCTOR AND BETWEEN MAIN EARTHING CONDUCTORS SHALL BE WELDED TYPE. FOR FLAT PROTECTION, THE WELDS SHALL BE PAINTED WITH RED OXIDE PRIMER AND AFTERWARDS COATED WITH TWO LAYERS BITUMEN COMPOUND TO PREVENT CORROSION"
13. ALL MAINS CONNECTIONS SHALL BE MADE BY ELECTRIC ARC WELDING. ALL WELDED JOINTS SHALL BE ALLOWED TO COOL DOWN GRADUALLY TO ATMOSPHERIC TEMPERATURE BEFORE PUTTING ANY LOAD ON IT. ARTIFICIAL COOLING SHALL NOT BE ALLOWED.
14. ALL ARC WELDING WITH LARGE DIA. CONNECTORS SHALL BE DONE WITH LOW HYDROGEN CONTENT ELECTRODES
15. "EARTHING TERMINAL OF EACH EARTHING ARRESTER & CAPACITOR VOLTAGE TRANSFORMER SHALL BE DIRECTLY CONNECTED TO MAIN EARTH ELECTRODE GRID IN TURN, SHALL BE CONNECTED TO EARTHING EARTHING GRID."
16. EARTHING SYSTEM INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH CODE OF PRACTICE FOR EARTHING IS:3043 UNLESS OTHERWISE SPECIFIED IN THE TECHNICAL SPECIFICATION.
17. "TAP-CONNECTIONS FROM THE EARTHING GRID TO THE EQUIPMENT/STRUCTURE TO BE EARTHED SHALL BE TERMINATED ON THE EARTHING TERMINALS OF THE EQUIPMENT/STRUCTURE AS PER "STANDARD EARTHING DETAILS" DWG NO. 1/2/4/5/6/8/9/10/11/12/13/14/15/16/17"
18. DRAWINGS FOR BUILDING EARTHING PROTECTION SHALL BE PROVIDED SEPARATELY.
19. FOR DETAILS OF EARTHING OF ALL THE EQUIPMENTS/STRUCTURE, PLEASE REFER TO INSTRUMENT SECTION.

REFERENCE DRAWINGS:-

Sl. No.	DRAWING/DOCUMENT TITLE	DRAWING/DOCUMENT No.
1.	DESIGNS OF 400/220/33KV TUTICORIN-II GIS SS ELECTRICAL LAYOUT PLAN & SECTION	H-2001-SPC-0-01
2.	DESIGNS OF 400/220/33KV TUTICORIN-II GIS SS PLINTH FOUNDATION LAYOUT	H-2001-SPC-0-02

REV. No.	REVISED DATE	DESCRIPTION	DRAWN	DESIGNED	CHECKED	APPROVED
0	01.10.25	ISSUED FOR APPROVAL	M	SS,RS	CS	DB

REVISIONS

CLIENT: POWER GRID CORPORATION OF INDIA LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)

SUPPLIER/CONTRACTOR: HYOSUNG (INDIA) PVT. LTD.

PROJECT: GIS SUBSTATION EXTENSION PACKAGE-GS 128 -"AUGMENTATION OF TRANSFORMATION CAPACITY AT 400/220KV TUTICORIN-II GIS FS BY TAKE NAIN BY 500MVA, 400/220KV ICT (4th) TO MEET N-1 RELIABILITY OF HS POOLING STATION".

PACKAGE: EXTENSION OF 400/220KV TUTICORIN-II GIS FS SUBSTATION

JOB No.	NAME	SIGN	DATE
DRWN	M		01.10.25
DSGN	SS,RS		01.10.25
CHKD	CS		01.10.25
APPD	DB		01.10.25

TITLE: EXTENSION OF 400/220KV TUTICORIN-II GIS S/E OUTDOOR EARTHING LAYOUT

SCALE: 1:200

PROJECTION

DRG. No.: H-PS5OTE-EPC-D-03

SHEET: 2 OF 2 | SIZE: A0 | REV.: 0

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