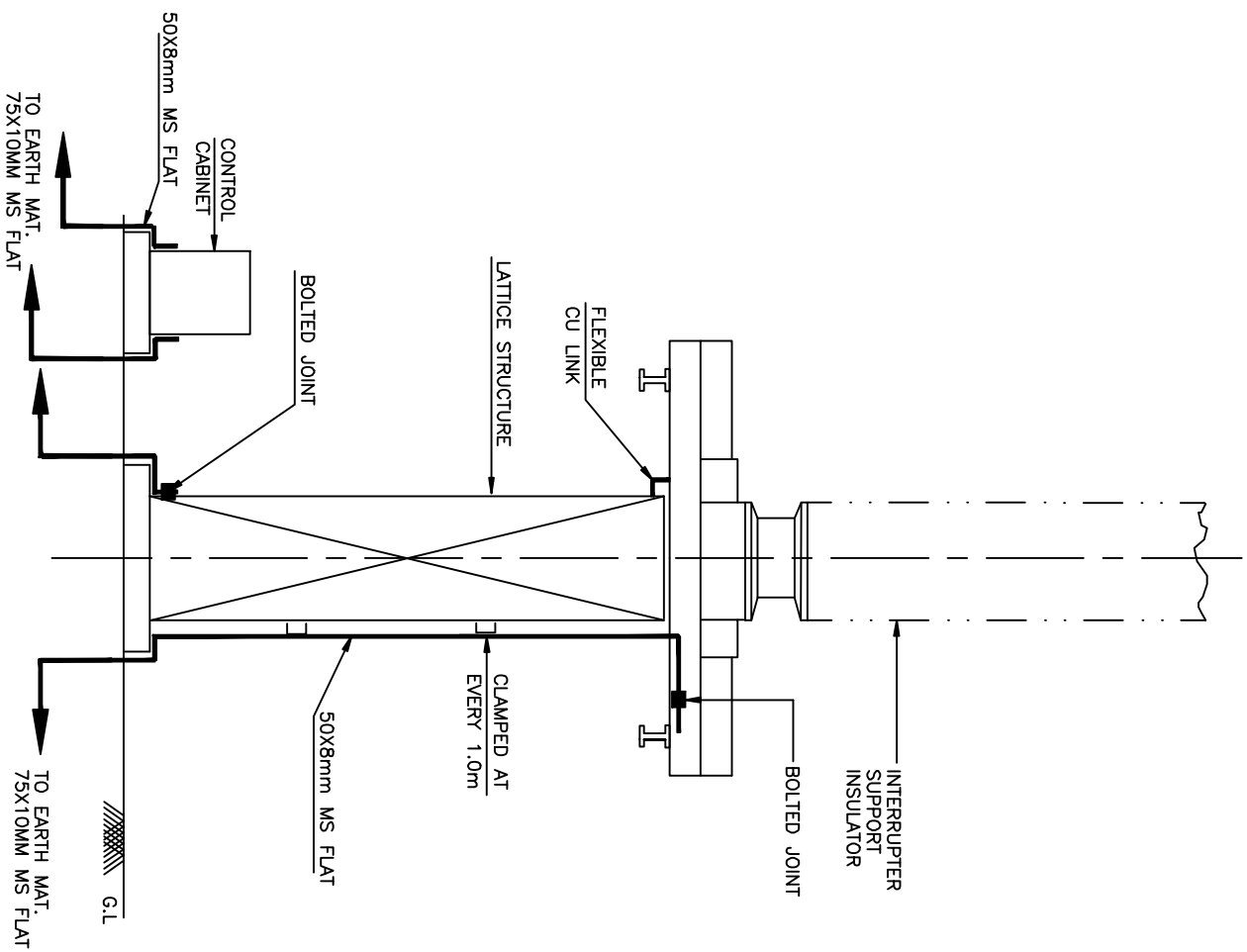


NOTE:
1) * BOLT SIZE AND HOLE SIZE SHALL BE TO SUIT RESPECTIVE EQPT./STRUCTURE.



EQUIPMENT EARTHING DETAILS 400kV SF6 CIRCUIT BREAKER

COMPUTER REF. NO.	DRG. No.	TB-4-324-316-007	REV. 00	SHEET No. 2
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NOTE:

- 1) LOCAL CONTROL CABINET, BREAKER POLE, LADDER & COMPRESSOR UNIT SHALL BE EARTHED SEPARATELY.



EQUIPMENT EARTHING DETAILS

220kV SF6 CIRCUIT BREAKER

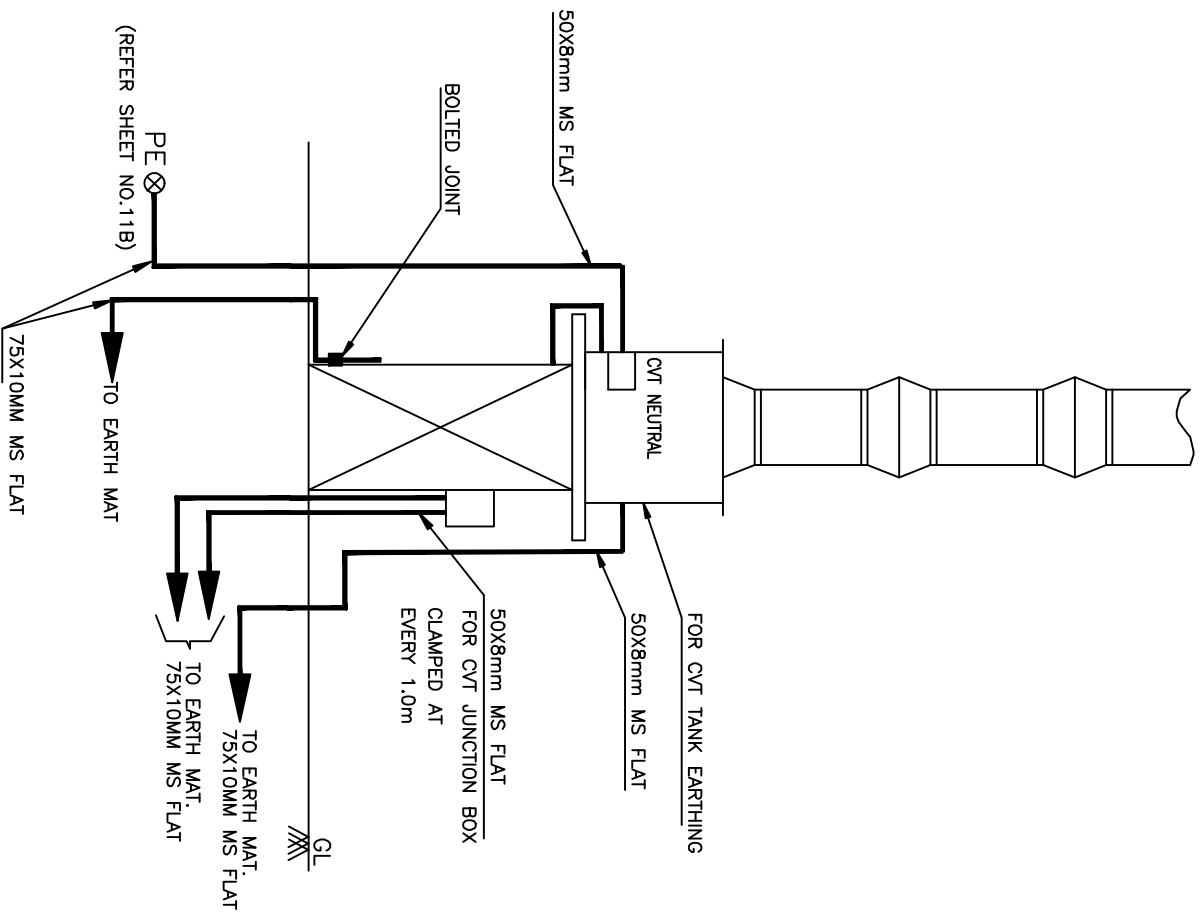
COMPUTERREF. NO.

DRG. No.

TB-4-324-316-007

REV. 00

SHEET No.
2A



EQUIPMENT EARTHING DETAILS

400/220kV CVT & 33kV PT

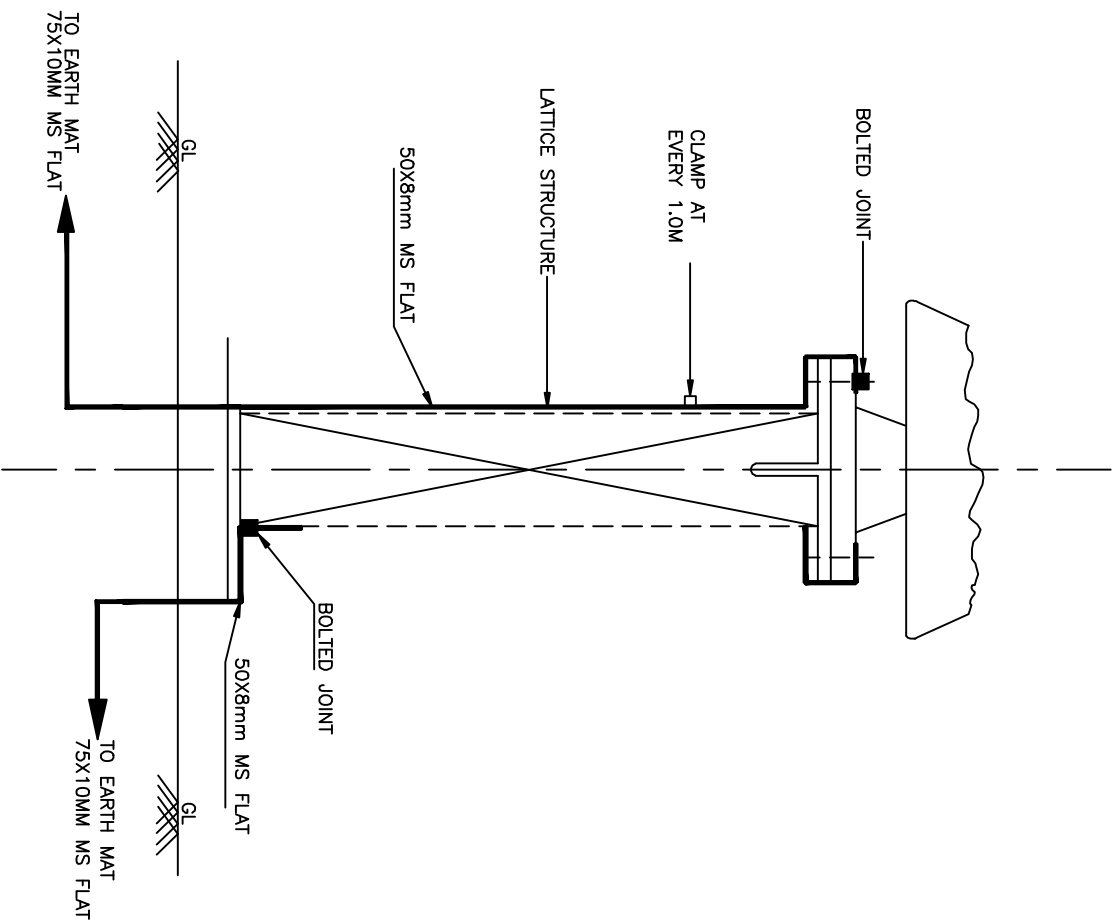
COMPUTER REF. NO.

DRG. No.

TB-4-324-316-007

REV. 00

SHEET No.
3

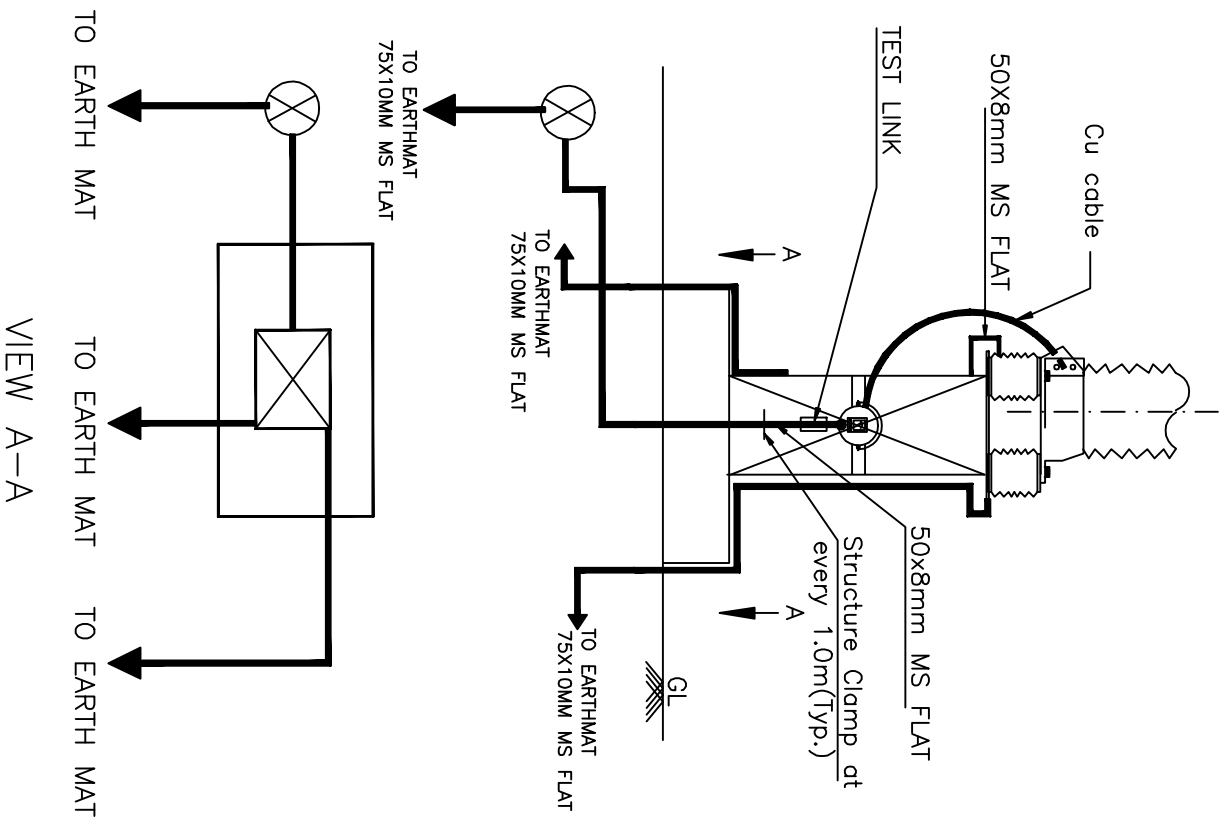


EQUIPMENT EARTHING DETAILS 400/220/33kV POST INSULATOR (SOLID CORE TYPE)

DRG. No. TB-4-324-316-007

REV. 00

SHEET No.
4



NOTES;

1. LA SHALL BE EARTHED THROUGH EARTH TERMINAL OF SURGE COUNTER
2. TEST LINK SHALL HAVE PROVISION TO BOLT TEST LEAD BEFORE ISOLATING THE MAIN EARTHING CONNECTIONS (AS PER SKETCH ABOVE) = 1NO.



EQUIPMENT EARTHING DETAILS

390/198/54/39/30kV LIGHTNING ARRESTER

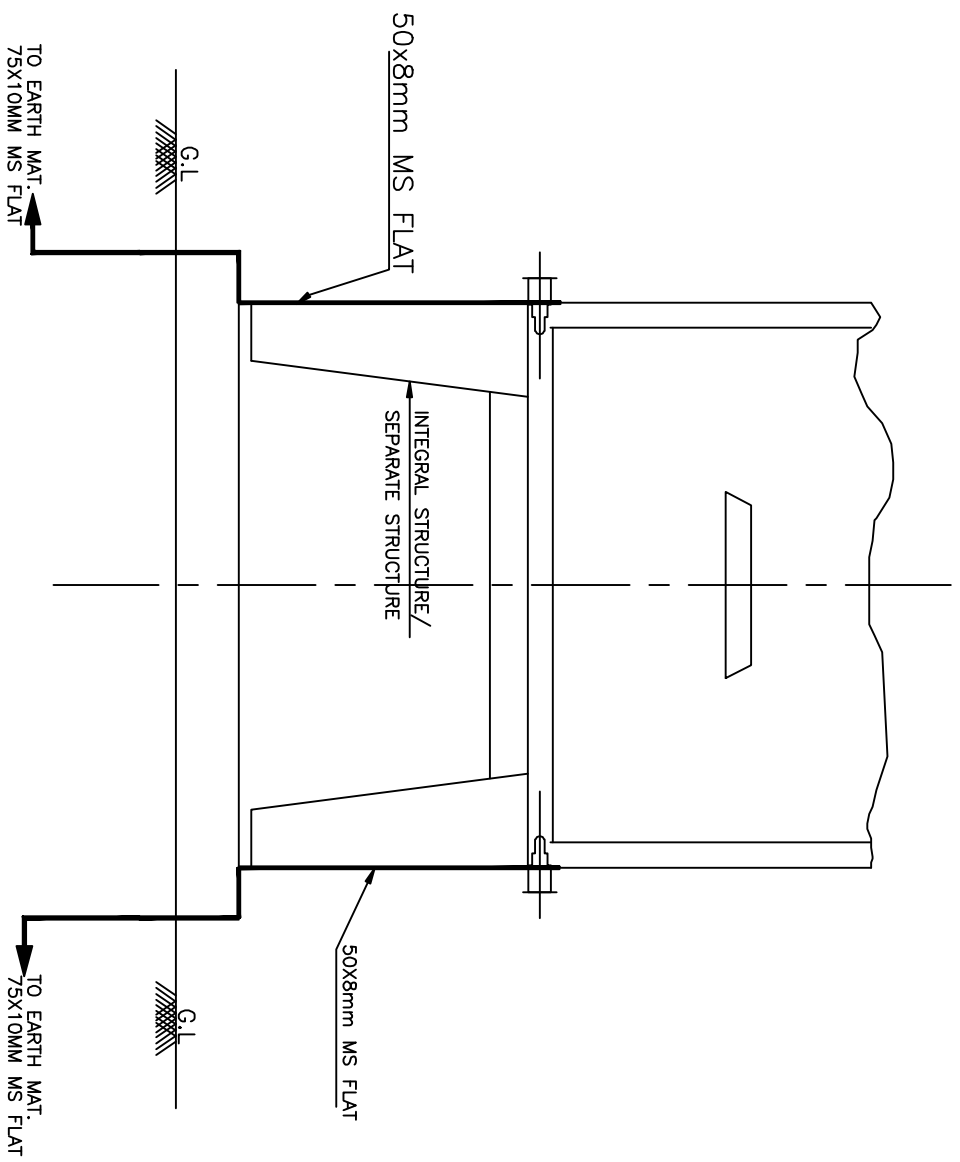
COMPU. DRG. REF.

DRG.NO.

TB-4-324-316-007

REV. 00

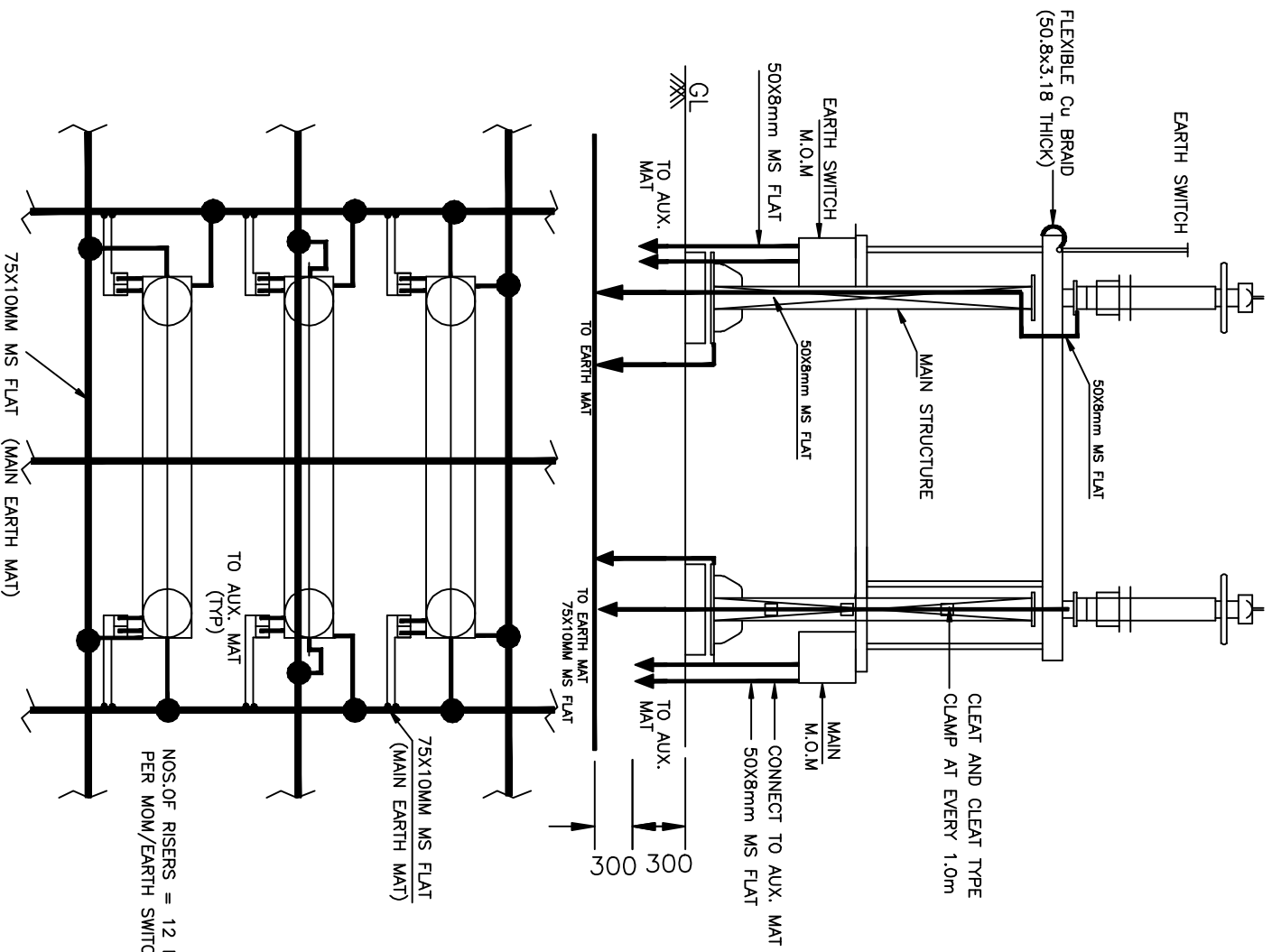
SHEET No.
5



EQUIPMENT EARTHING DETAILS

MARSHALLING KIOSK

COMPUTER REF. NO.	DRG. No.	TB-4-324-316-007	REV. 00	SHEET No.
				6



NOTES

1. AUXILIARY EARTH MAT SHALL BE PROVIDED BELOW EVERY MOM BOX (REFER SHEET 14).

● RISER



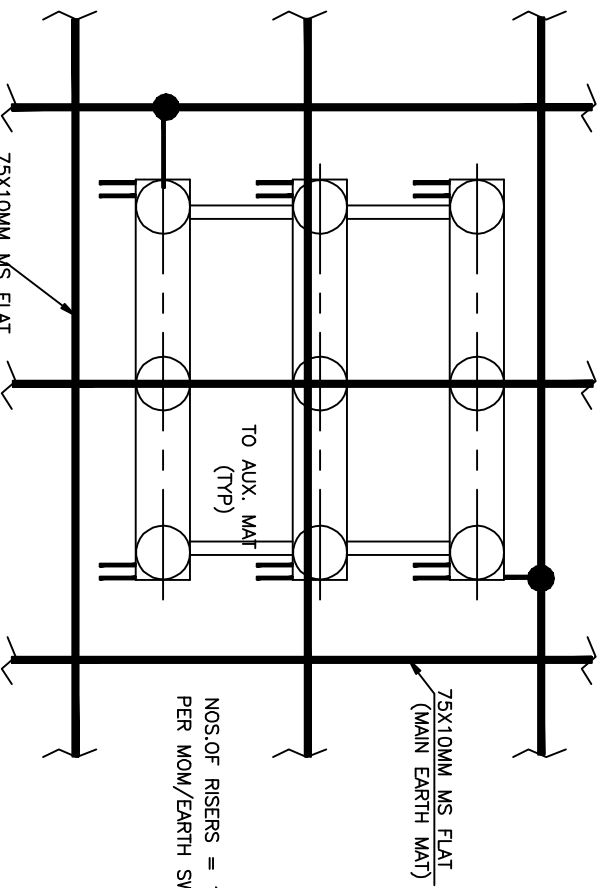
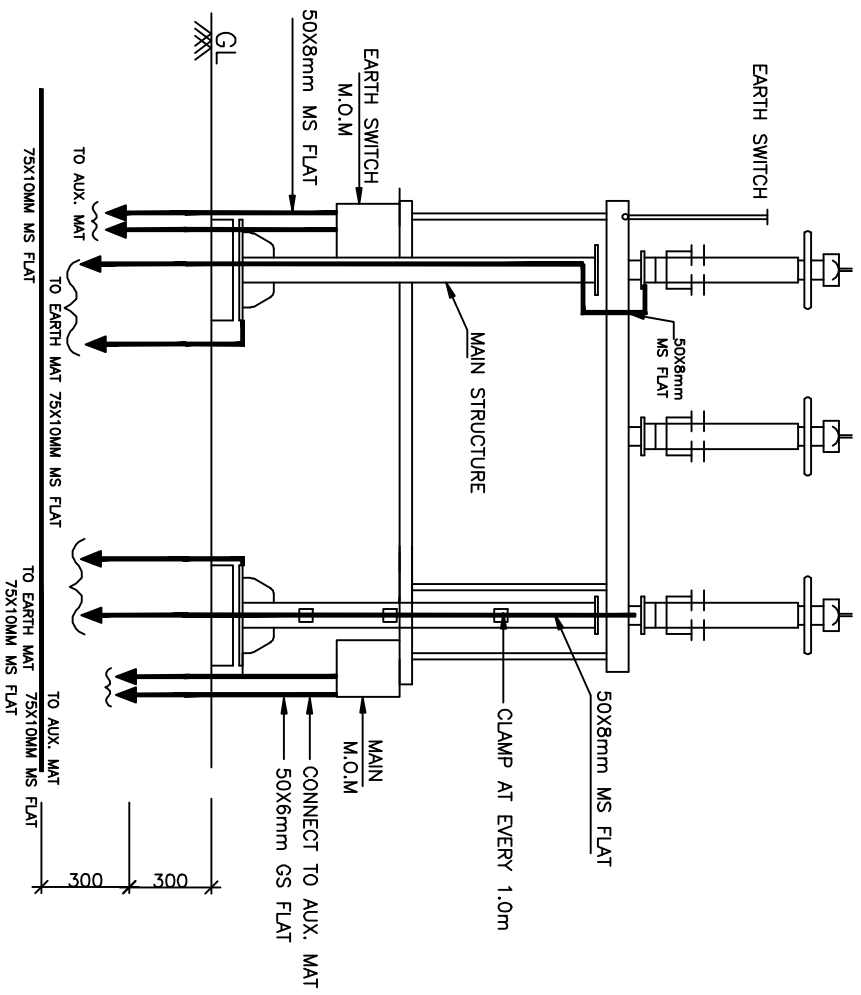
EQUIPMENT EARTHING DETAILS 400kV HORIZONTAL CENTER BREAK ISOLATOR WITH 1 E/S

COMPUTER REF. NO.

DRG. No. TB-4-324-316-007

REV. 00

SHEET No. 07



NOS.OF RISERS = 12 NOS.+2NO.
PER MOM/EARTH SWITCH BOX

NOTES

1. AUXILIARY EARTH MAT SHALL BE PROVIDED BELOW EVERY MOM BOX (REFER SHEET 14)

- RISER



EQUIPMENT EARTHING DETAILS 220kV DOUBLE BREAK ISOLATOR (TYPICAL) WITH ONE EARTHSWITCH

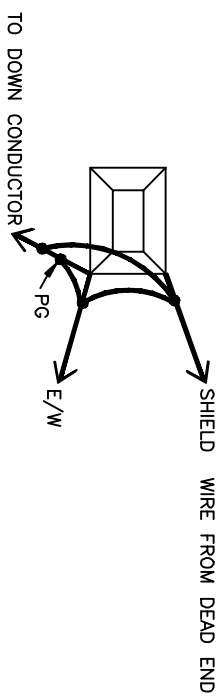
COMPUTERREF.NO.

DRG. No.

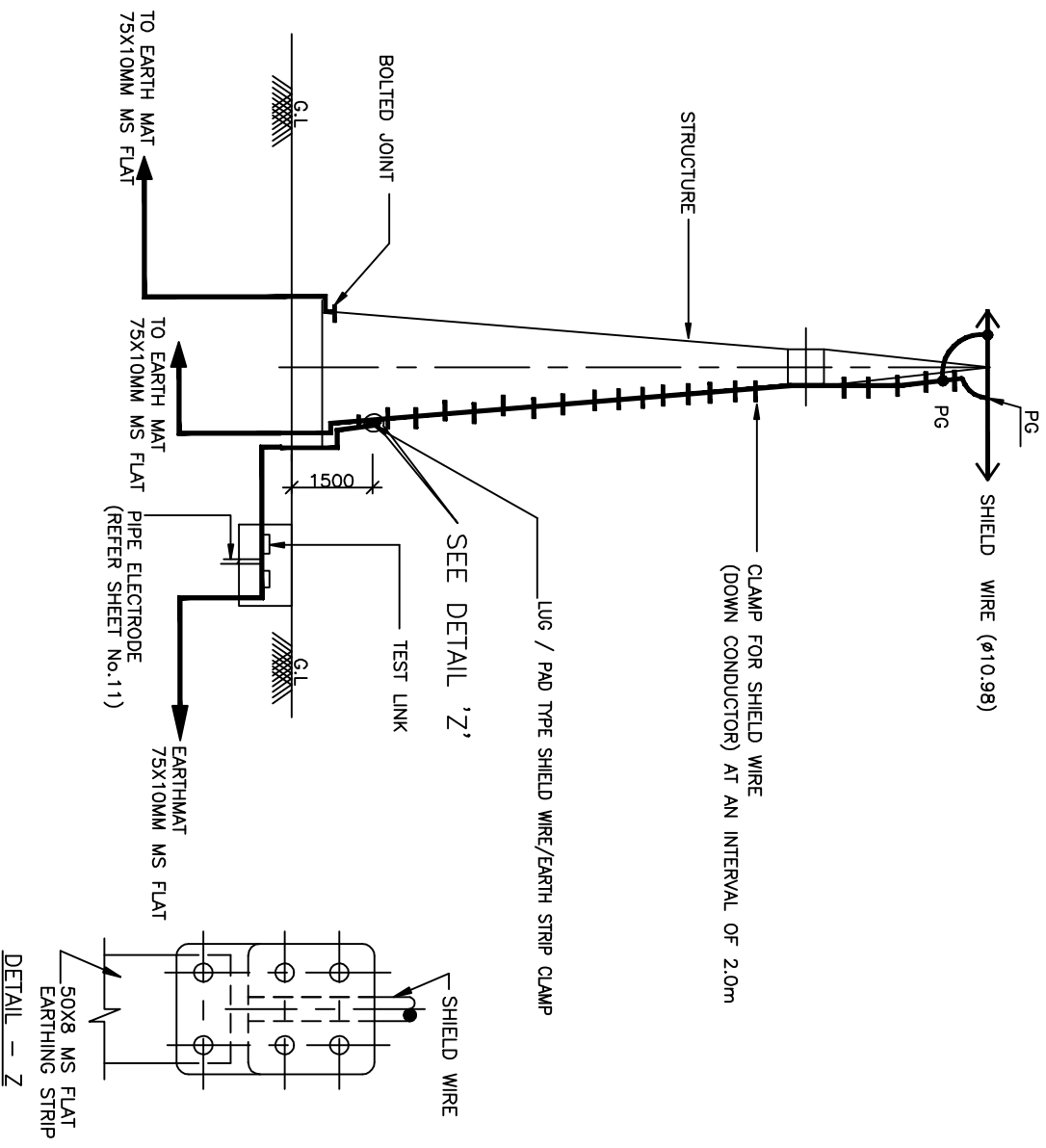
TB-4-324-316-007

REV. 00

SHEET No.
7C



DETAIL WHEN 2 & E/WIRE TERMINATES A TOWER



NOTE:

1. NO. OF PIPE ELECTRODE WITH TEST PIT : 1 NO. PER TOWER WITH DOWN CONDUCTOR.



EQUIPMENT EARTHING DETAILS

SHIELD WIRE TOWER

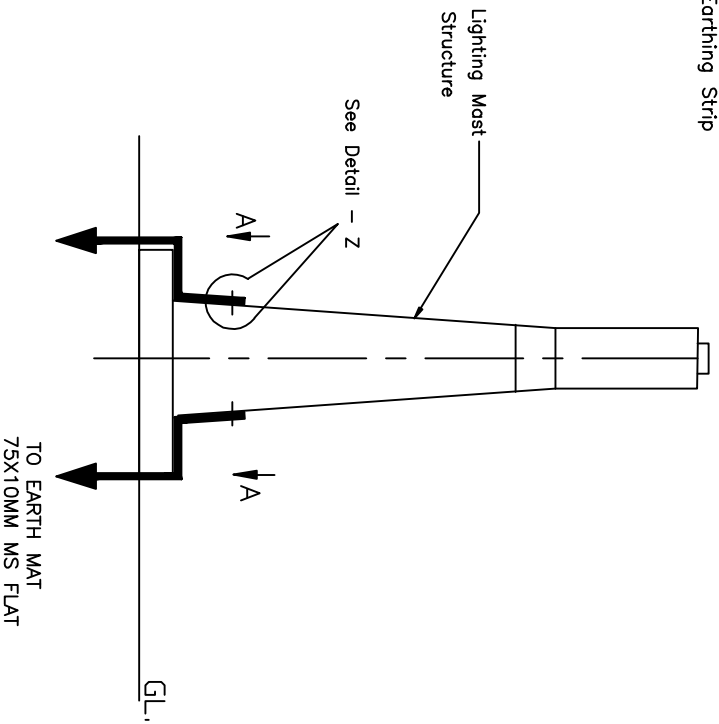
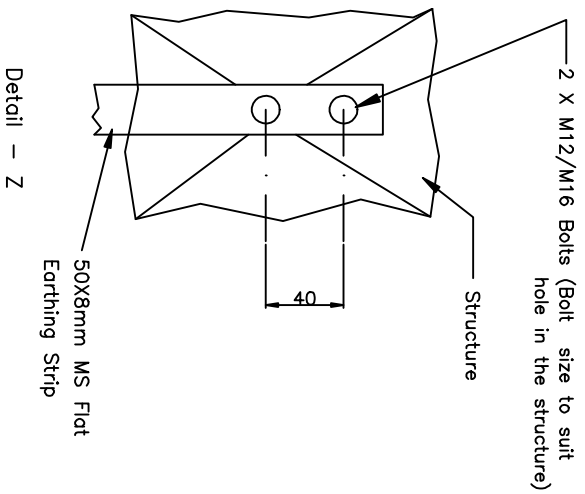
COMPUTERREF.NO.

DRG. No.

TB-4-324-316-007

REV. 00

SHEET No.
8

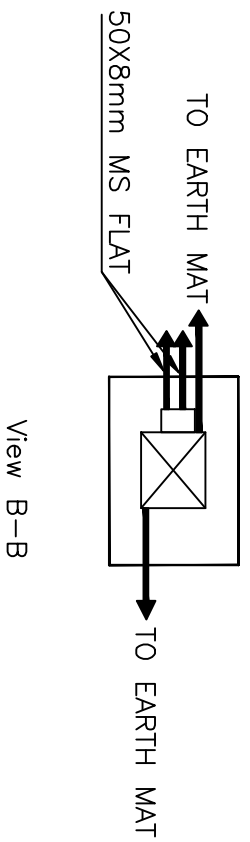
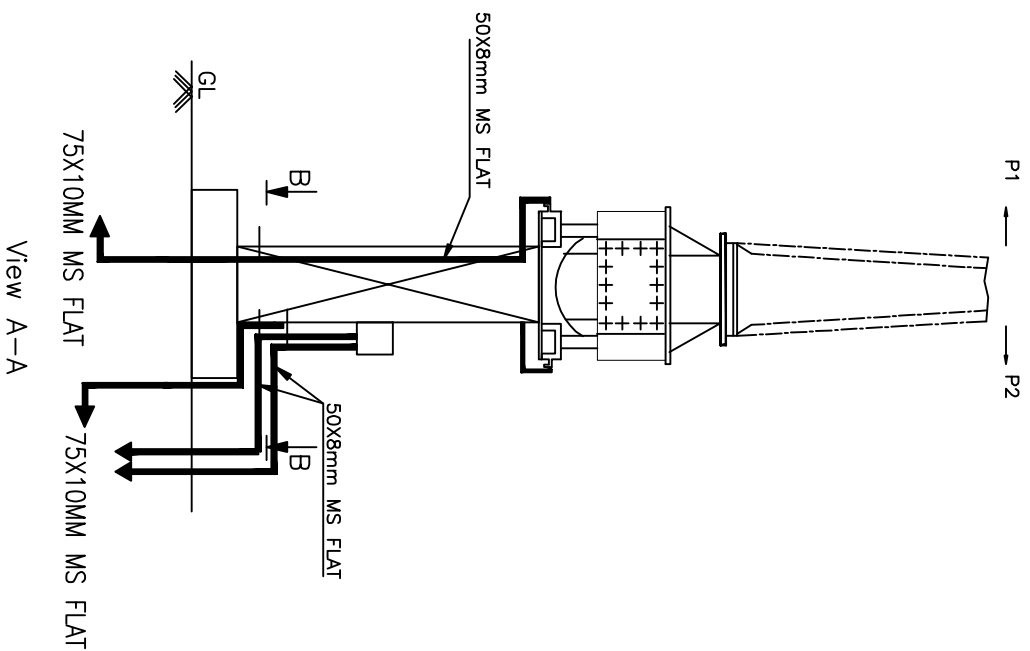


View A-A



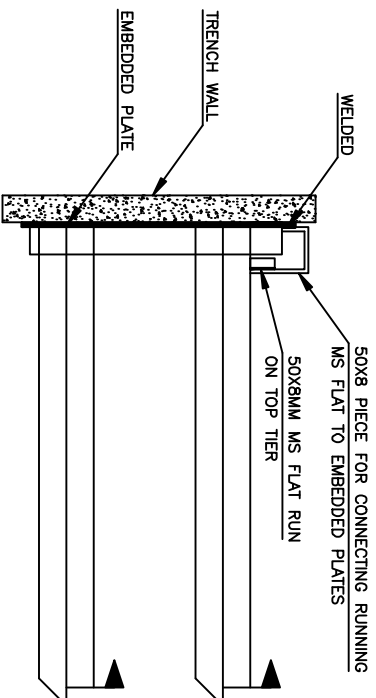
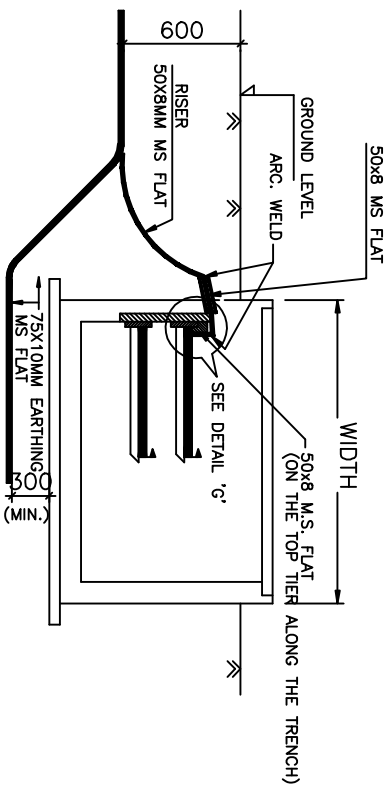
EQUIPMENT EARTHING DETAILS LIGHTING MAST

COMPUTERREF. NO.	DRG. No.	TB-4-324-316-007	REV. 00	SHEET No. 8A
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EQUIPMENT EARTHING DETAILS 400/220kV Current Transformer

COMPU. DRG. REF.	DRG.NO.	TB-4-324-316-007	REV. 00	SHEET No. 9
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DETAIL 'G'

DETAIL FOR CONNECTING GI FLAT RUNNING
ON TOP TIER TRENCH TO EMBEDDED PLATE.

NOTE:

1. ALL TRENCHES SHALL BE EARTHED AT AN INTERVAL OF 30M ALONG THE LENGTH OF TRENCH & FREE ENDS.
2. THE EARTH STRIP (50x8 M.S. FLAT) SHALL BE WELDED TO EMBEDDED PLATE AT EVERY 0.75M INTERVAL.
3. WHERE THE CABLE RACKS ARE PROVIDED ON BOTH SIDES OF THE TRENCH, BOTH SIDES SHALL BE EARTHED AS PER ABOVE.



EQUIPMENT EARTHING DETAILS CABLE TRENCH

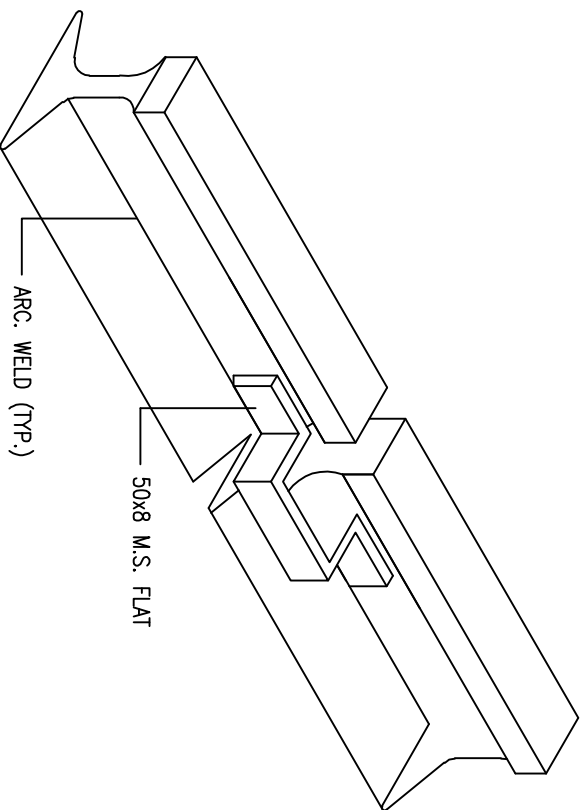
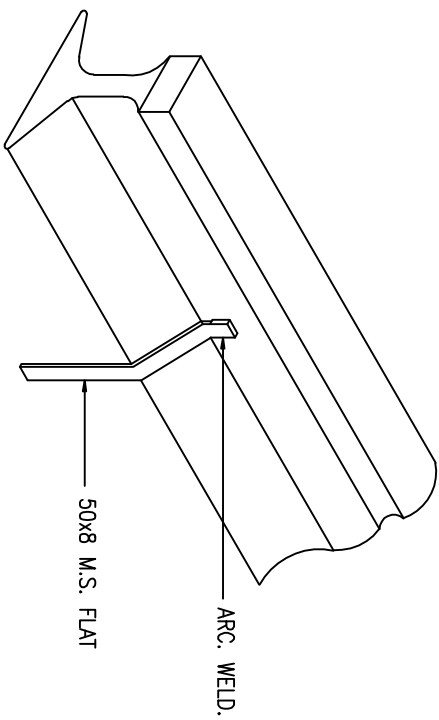
COMPU. DRG. REF.

DRG. NO.

TB-4-324-316-007

REV. 00

SHEET
10



NOTE:—

1. RAILWAY TRACKS WITHIN SWITCHYARD AREA SHALL BE EARTHED AT A SPACING OF 30 m AND ALSO AT BOTH ENDS.



EQUIPMENT EARTHING DETAILS RAIL BONDING

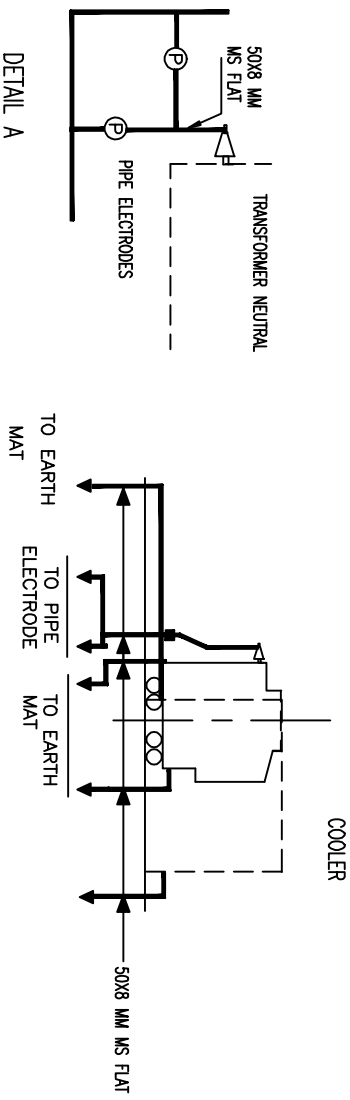
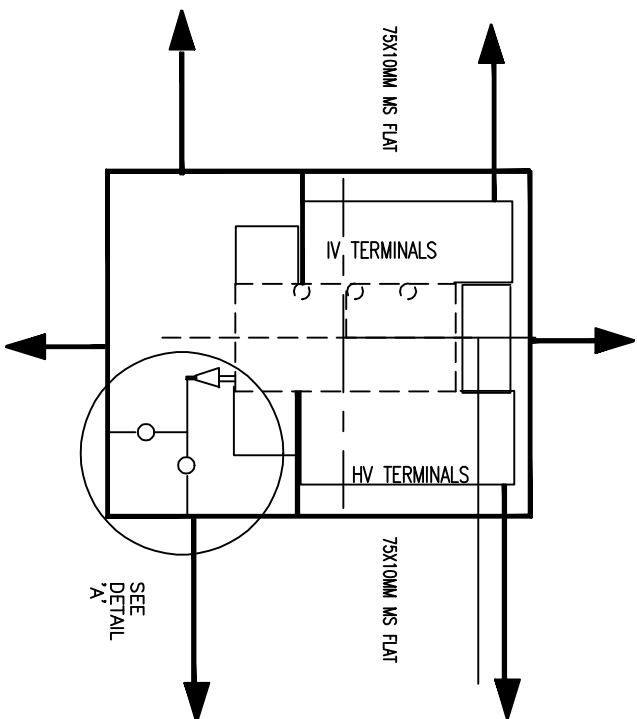
COMPU. DRG. REF.

DRG. NO.

TB-4-324-316-007

REV. 00

SHEET No.
12



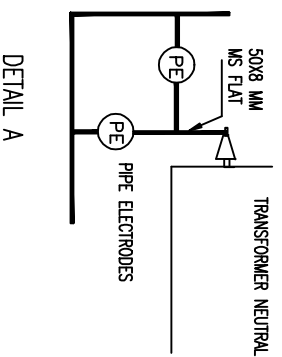
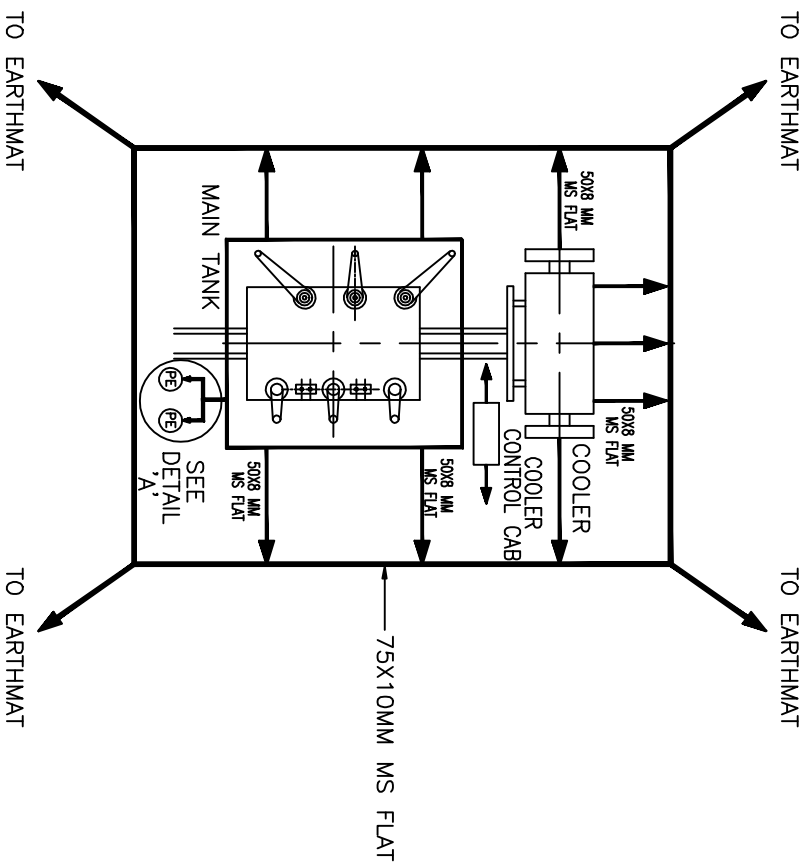
EQUIPMENT EARTHING DETAILS LT TRANSFORMER

DRG. No.

TB-4-324-316-007

REV. 00

SHEET No.
13



NOTES:-

1. EARTH CONTINUITY ACROSS GASKETED JOINTS MUST BE ENSURED USING FLEXIBLE OR FLAT.
2. ALL ACCESSORIES ASSOCIATED WITH TRANSFORMER LIKE COOLING BANKS, RADIATORS, MAIN TANK, MARSHALLING KIOX ETC. SHALL BE CONNECTED TO THE EARTHING GRID AT MINIMUM TWO POINTS.

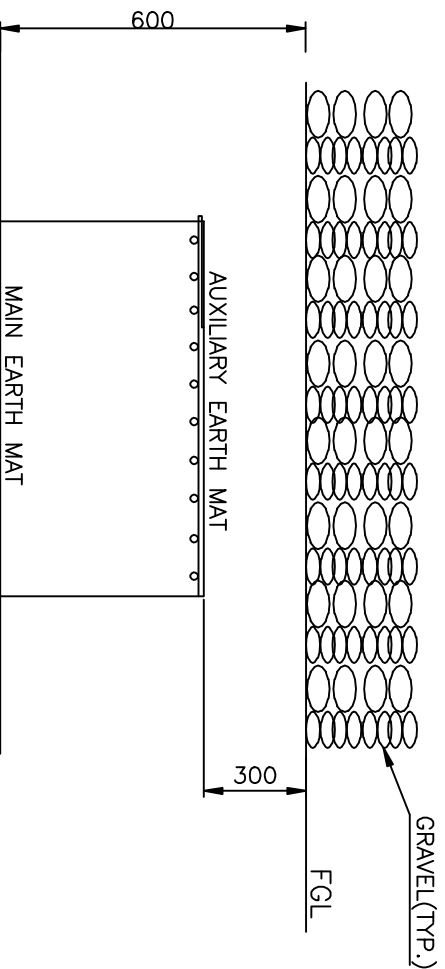
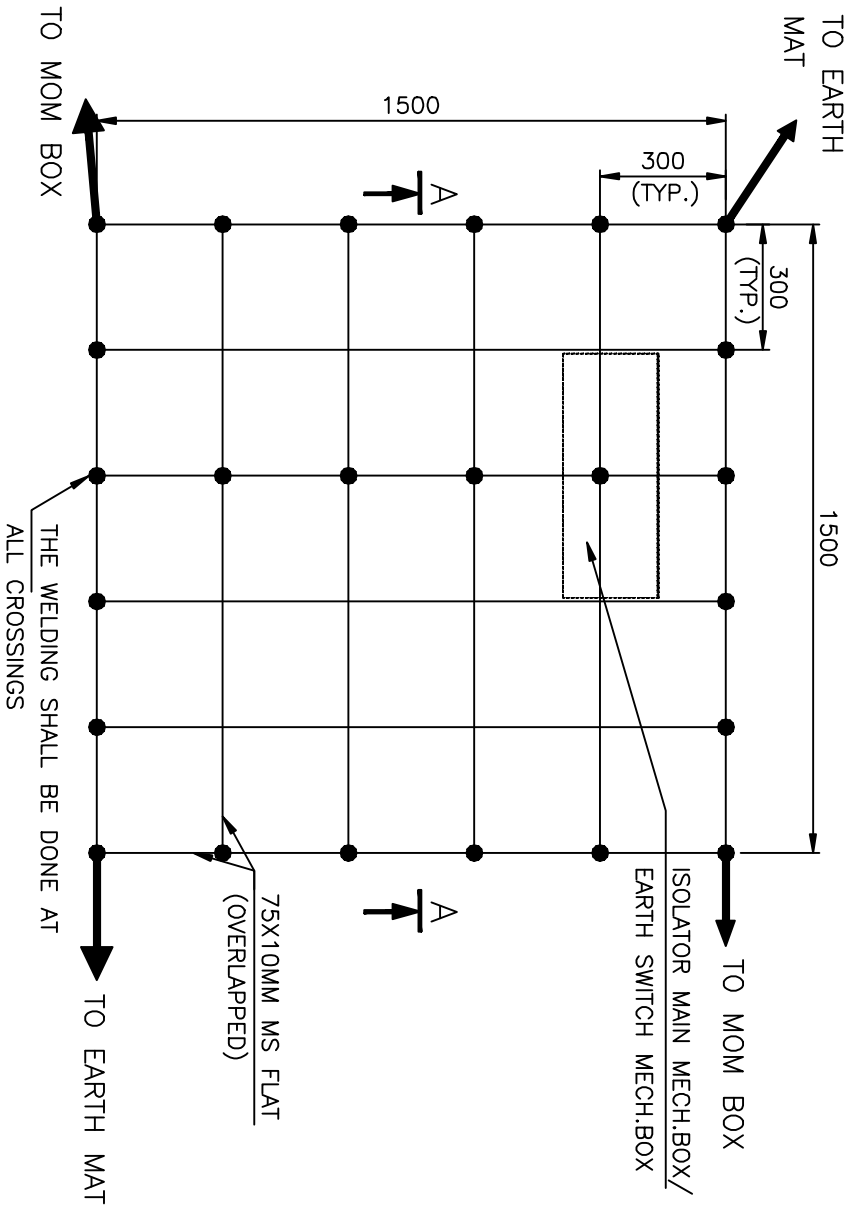


EQUIPMENT EARTHING DETAILS AUTO TRANSFORMER

DRG. No. TB-4-324-316-007

REV. 00

SHEET No.
13A

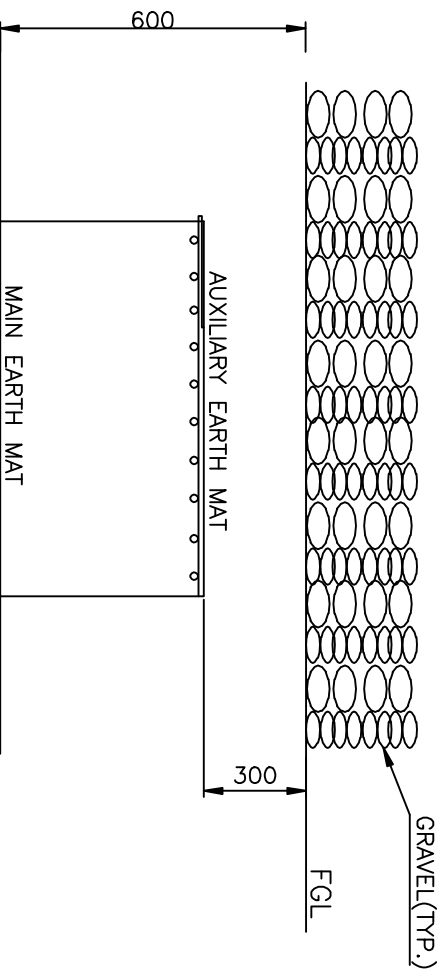
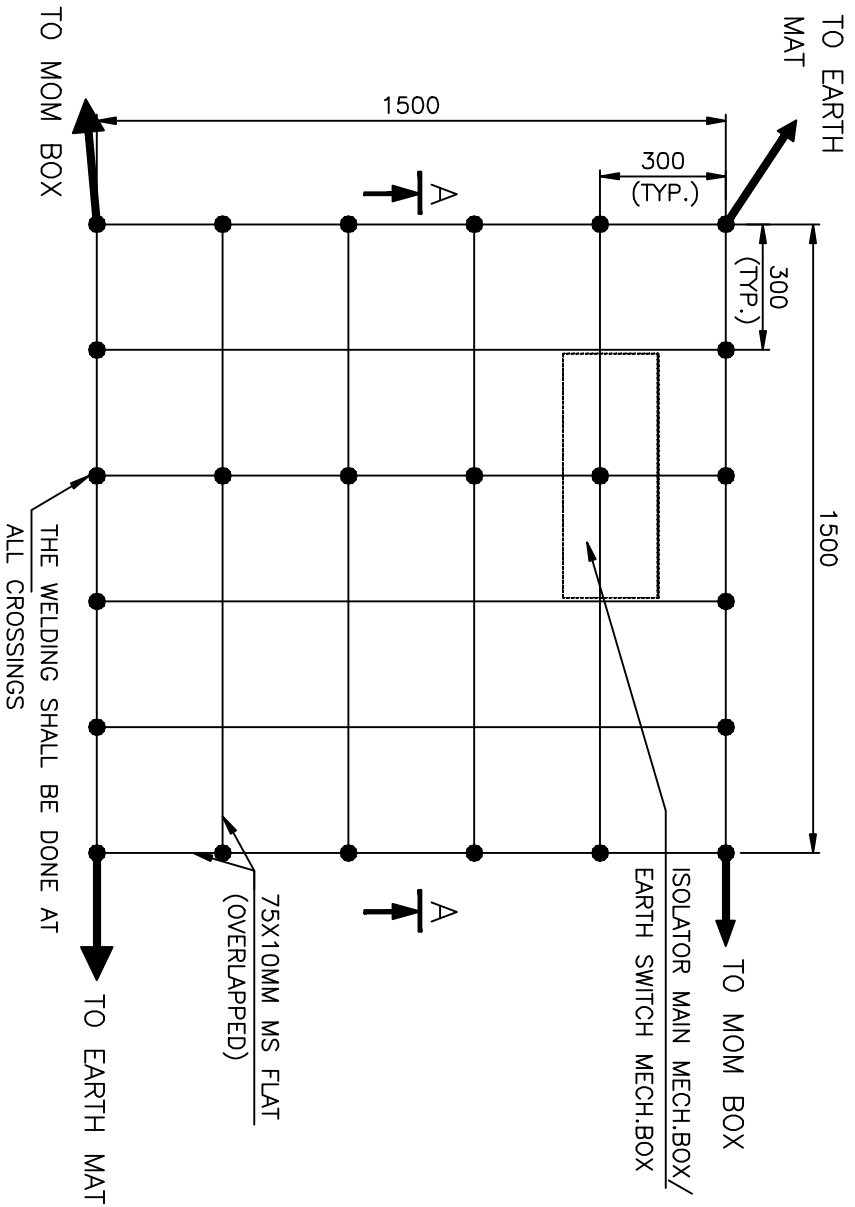


NOTE:

SECTION AA

AUX. EARTH MAT SHALL BE SO POSITIONED THAT THE FOOT OF THE OPERATOR ALWAYS LIE OVER THE AUX. EARTH MAT AREA WHILE ATTENDING / OPERATING THE MECH. BOX THE CABLE TRENCH ROUTING SHALL BE PLANNED ACCORDINGLY.

	<p>EQUIPMENT EARTHING DETAILS</p> <p>AUXILIARY EARTH MAT FOR ISOLATOR MAIN MECH.,E/S MECH. BOX</p>
<p>COMPU. DRG. REF.</p>	<p>Report No. TB-4-324-316-007</p> <p>REV. 00</p> <p>SHEET No. 14</p>



NOTE:

AUX. EARTH MAT SHALL BE SO POSITIONED THAT THE FOOT OF THE OPERATOR ALWAYS LIE OVER THE AUX. EARTH MAT AREA WHILE ATTENDING / OPERATING THE MECH. BOX THE CABLE TRENCH ROUTING SHALL BE PLANNED ACCORDINGLY.



EQUIPMENT EARTHING DETAILS

AUXILIARY EARTH MAT FOR ISOLATOR MAIN MECH.,E/S
MECH. BOX

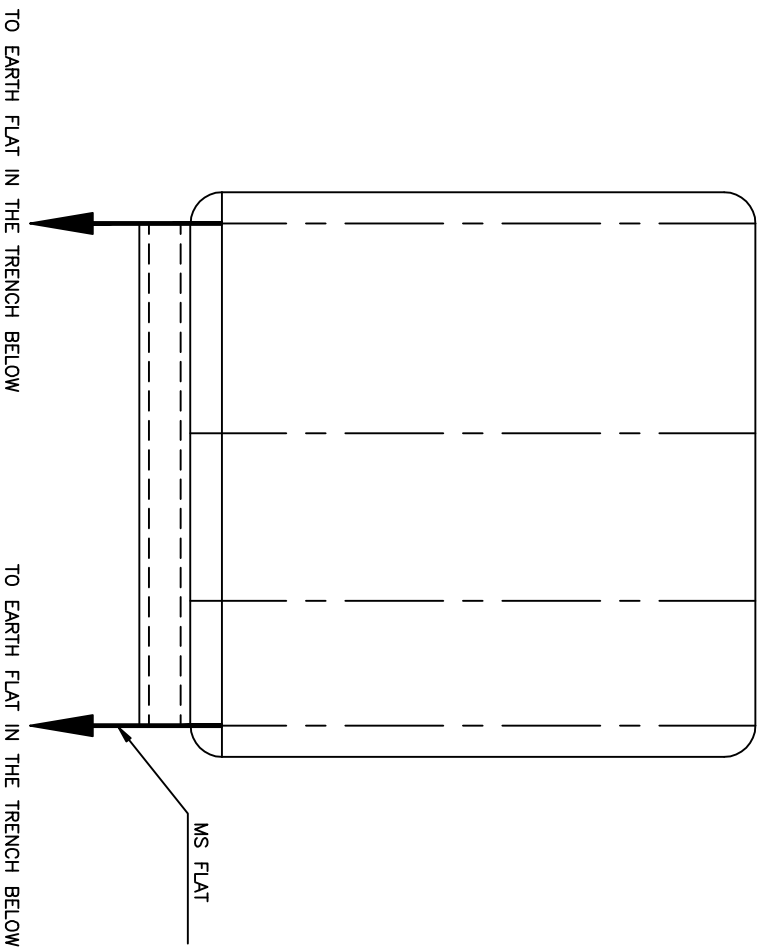
COMPU. DRG. REF.

Report No.

TB-4-324-316-007

REV. 00

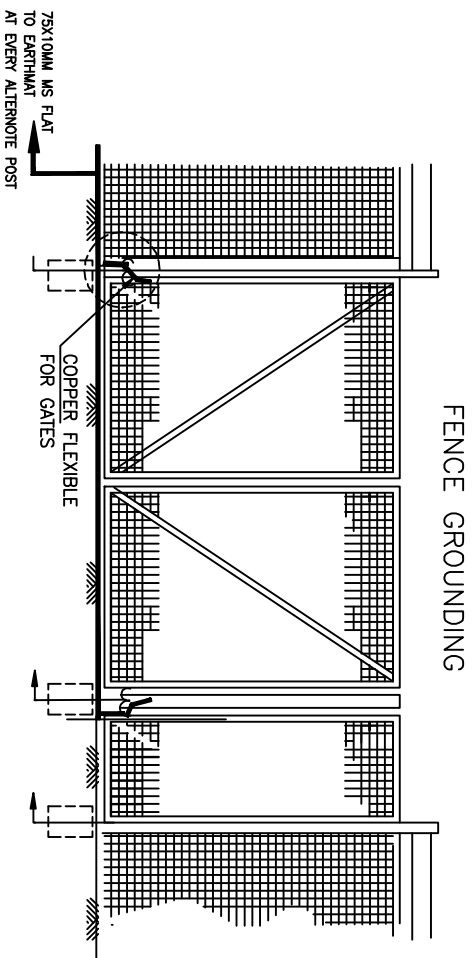
SHEET No.
14



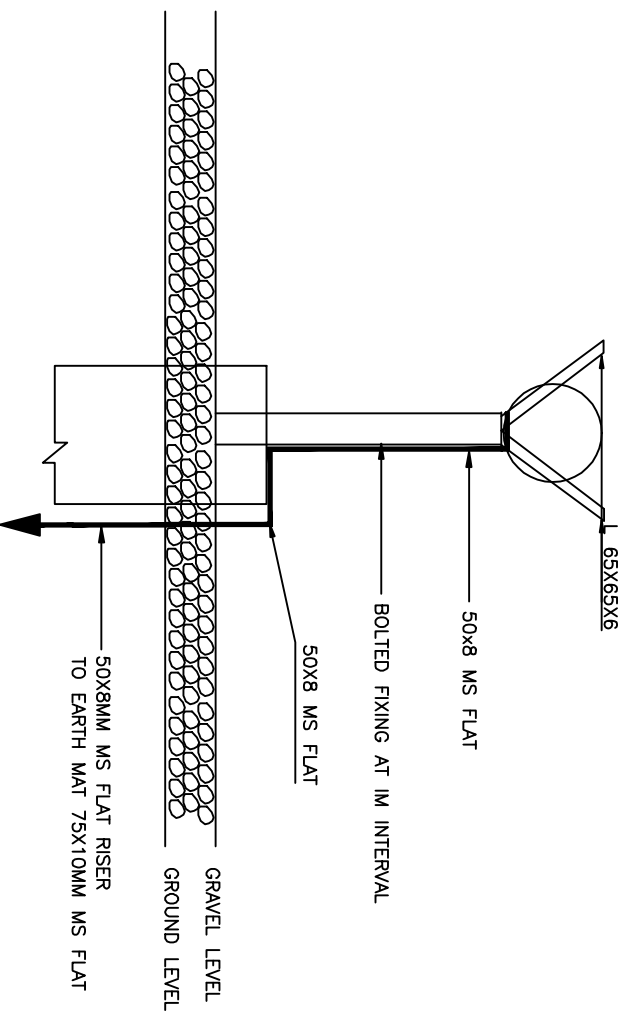
EQUIPMENT	FLAT SIZE
SWITCHGEAR/ MCC	50X8 MM
AC / DC DISTRIBUTION BOARDS	50X8 MM
CONTROL & RELAY PANELS	50X8 MM
AC KIOSK	50X8 MM
NO. OF RISER =2	



EQUIPMENT EARTHING DETAILS SWITCHGEAR / MCC / CONTROL AND RELAY BOARD/AC KIOSK



EVERY ALTERNATE FENCE POSTS SHALL BE EARTHED BY 50X8 MM MS FLAT.
50X8 FLAT SHALL BE WELDED TO 65X65X6 ANGLES FORMING V-SHAPE AT THE TOP OF FENCE



FENCE EARTHING



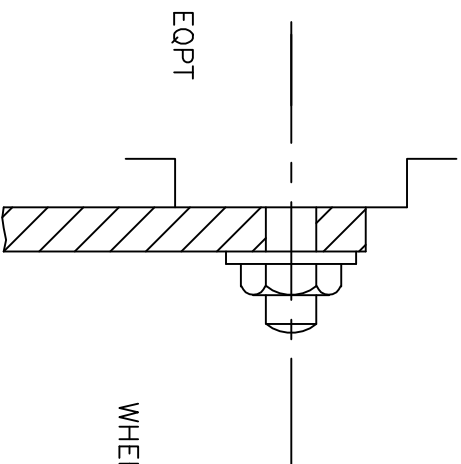
EQUIPMENT EARTHING DETAILS FENCE POST

DRG. No.

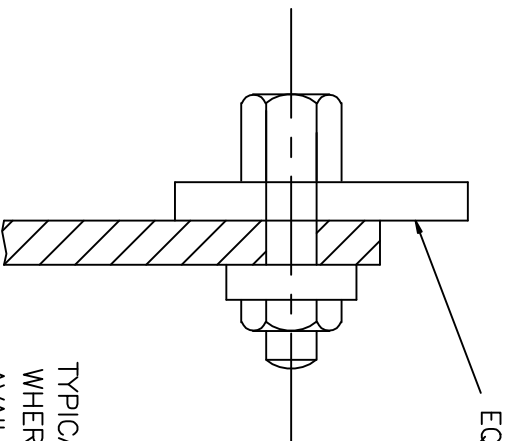
TB-4-324-316-007

REV. 00

SHEET No.
16



TYPICAL EARTHING TERMINAL JOINT



NOTE

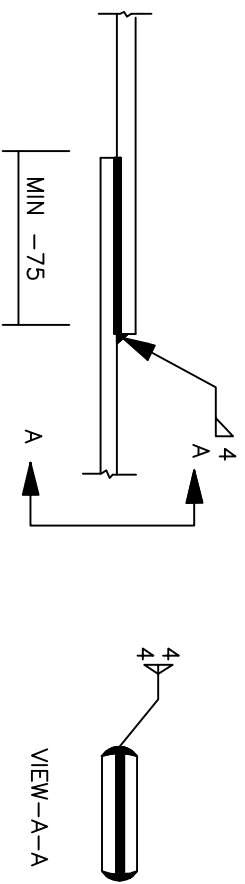
1. THIS IS GENERAL TYPICAL BOLTING ARRANGEMENT APPLICABLE TO ALL PANELS, EQUIPMENT,ETC,WHERE BOLTING ARRANGEMENT IS PROVIDED.
2. IN CASE EARTHING TERMINAL COMPRISES ONLY A TAPPED HOLE SUITABLE BOLT/ SCREW WITH WASHER MAY BE USED FOR EARTHING CONDUCTOR TERMINATION



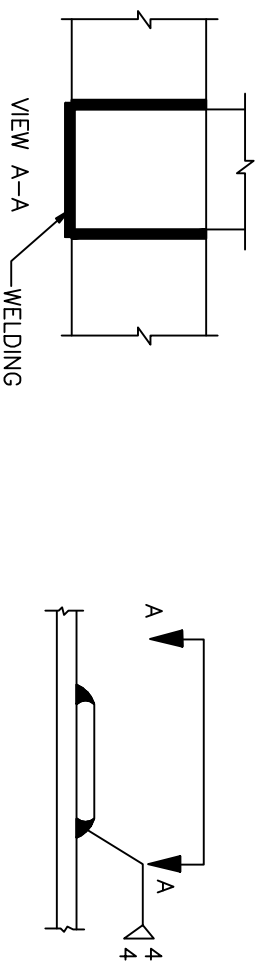
EQUIPMENT EARTHING DETAILS
TYPICAL ARRANGEMENT OF BOLTED JOINTS

STRIP TO STRIP

1. STRAIGHT LAP JOINT/RISE



2. CROSS LAP JOINT



EQUIPMENT EARTHING DETAILS
WELDING DETAIL

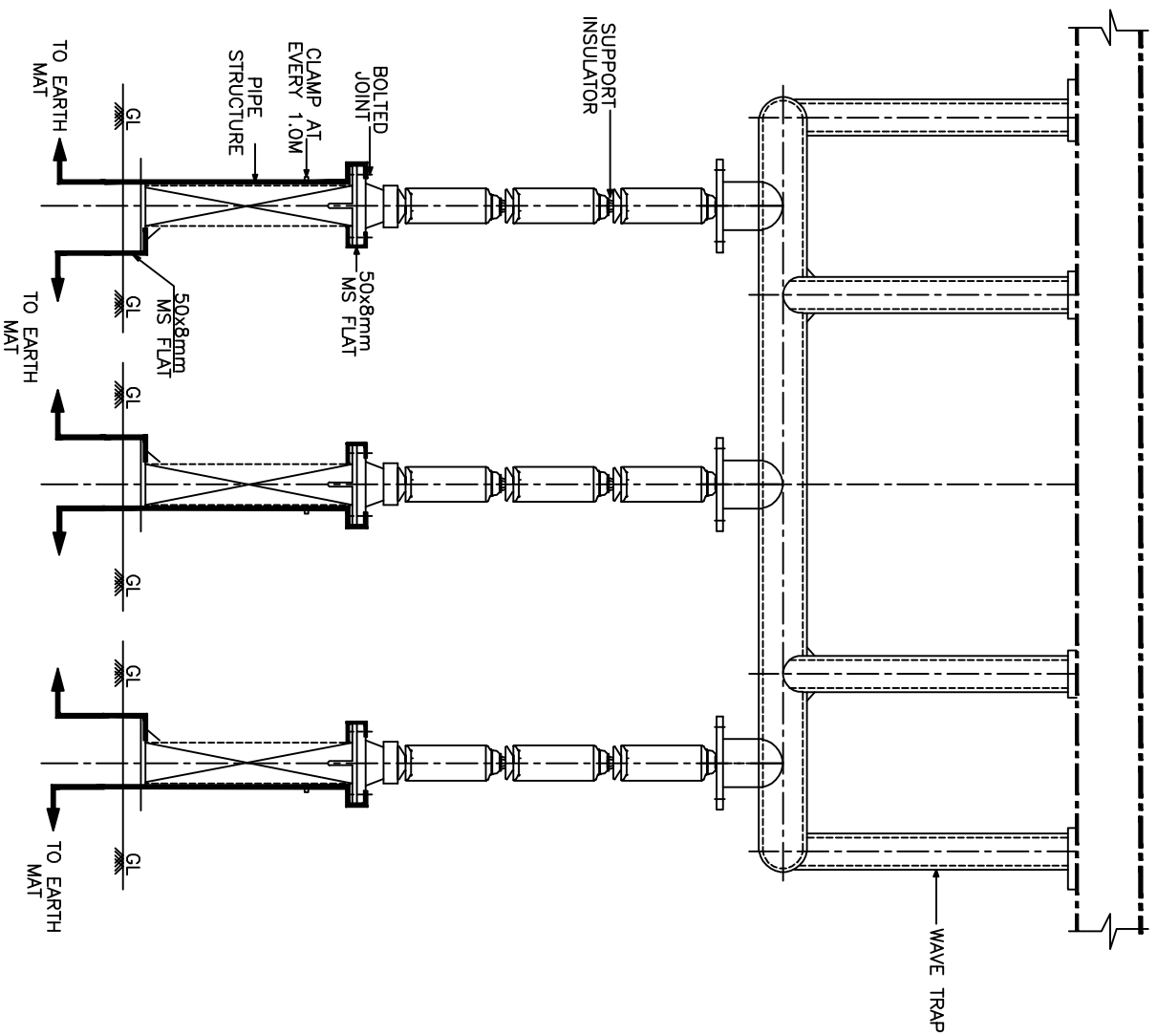
COMPUTER REF. NO.

DRG. No.

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REV. 00

SHEET No.
18



NO. OF RISER=6NO. PER PHASE

EQUIPMENT EARTHING DETAILS 400/220kV WAVE TRAP



COMPUTER REF. NO.

DRG. No.

TB-4-324-316-007

REV. 00

SHEET No.
19