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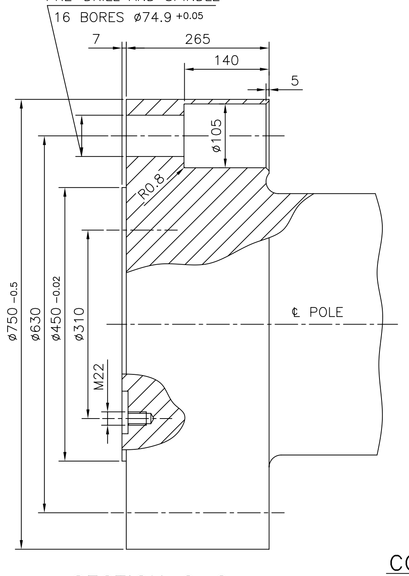
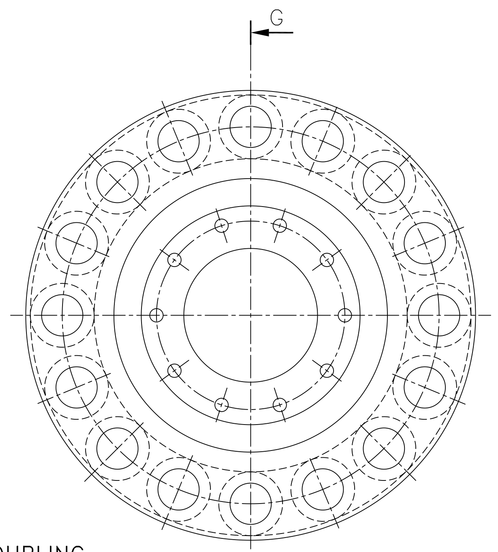
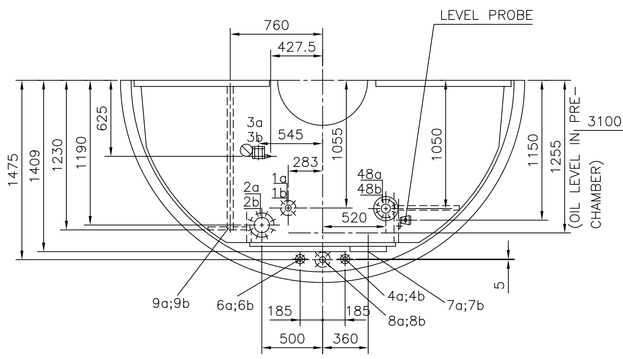
PRE-DRILL AND SPINDLE
16 BORES ø74.9 +0.05



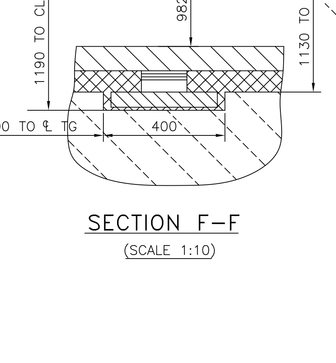
SECTION G-G (SCALE 1:5)



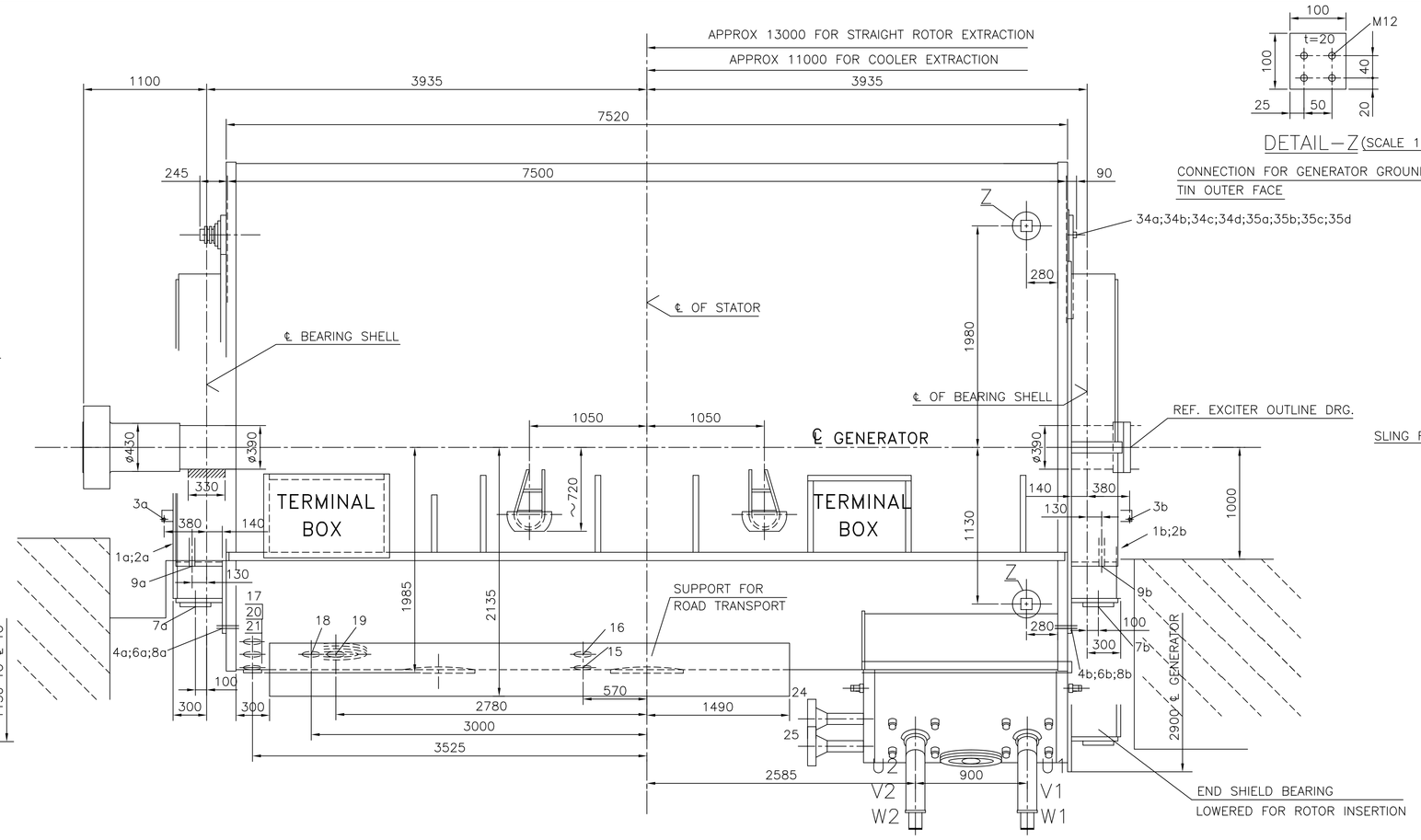
COUPLING

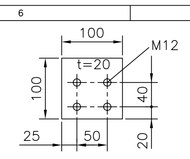


END SHIELD BEARING LOWER SECTION (TE; EE)



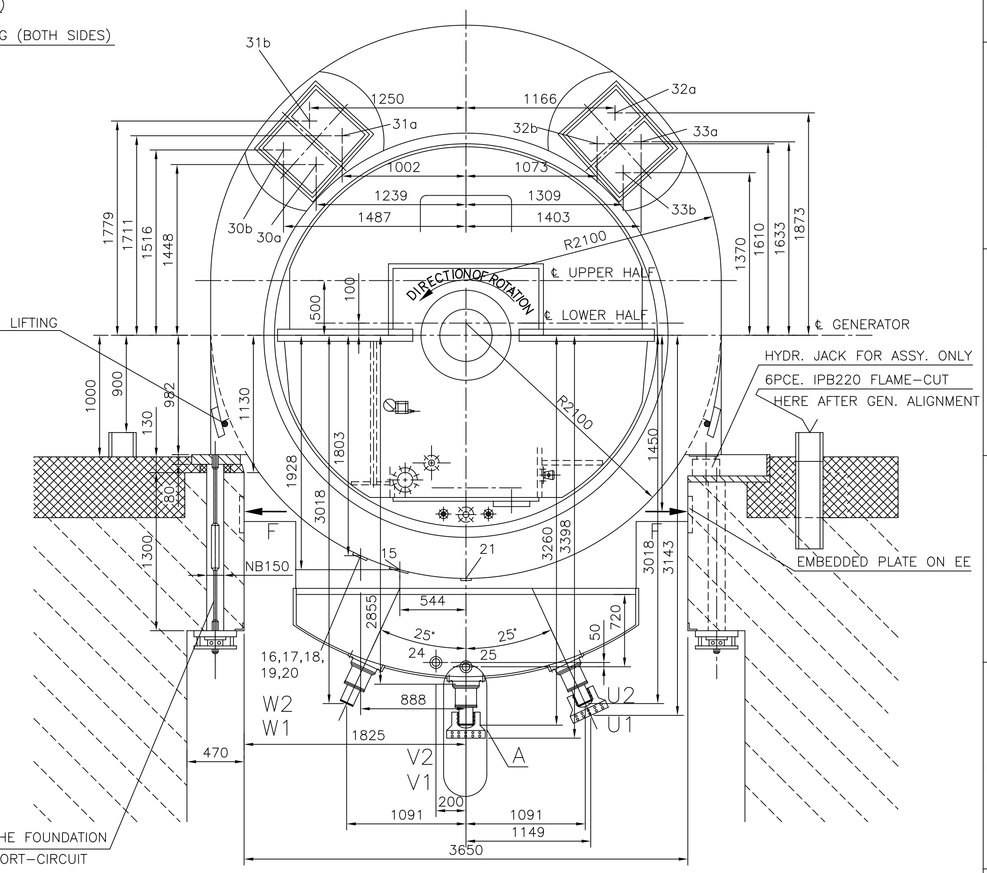
SECTION F-F
(SCALE 1:10)





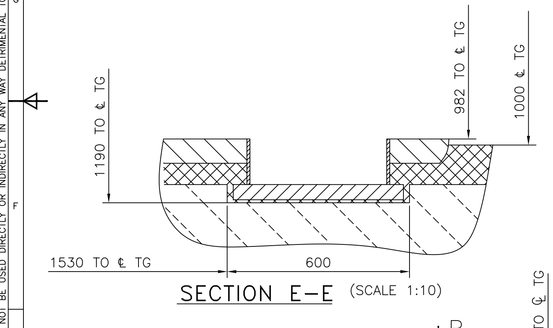
DETAIL-Z (SCALE 1:10)

CONNECTION FOR GENERATOR GROUNDING (BOTH SIDES)
TIN OUTER FACE

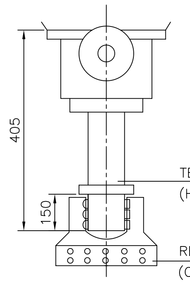


THE CHOSEN PRESTRESS OF THE FOUNDATION BOLT IS 260 KN AND MAX. SHORT-CIRCUIT FORCE IS 238 KN.

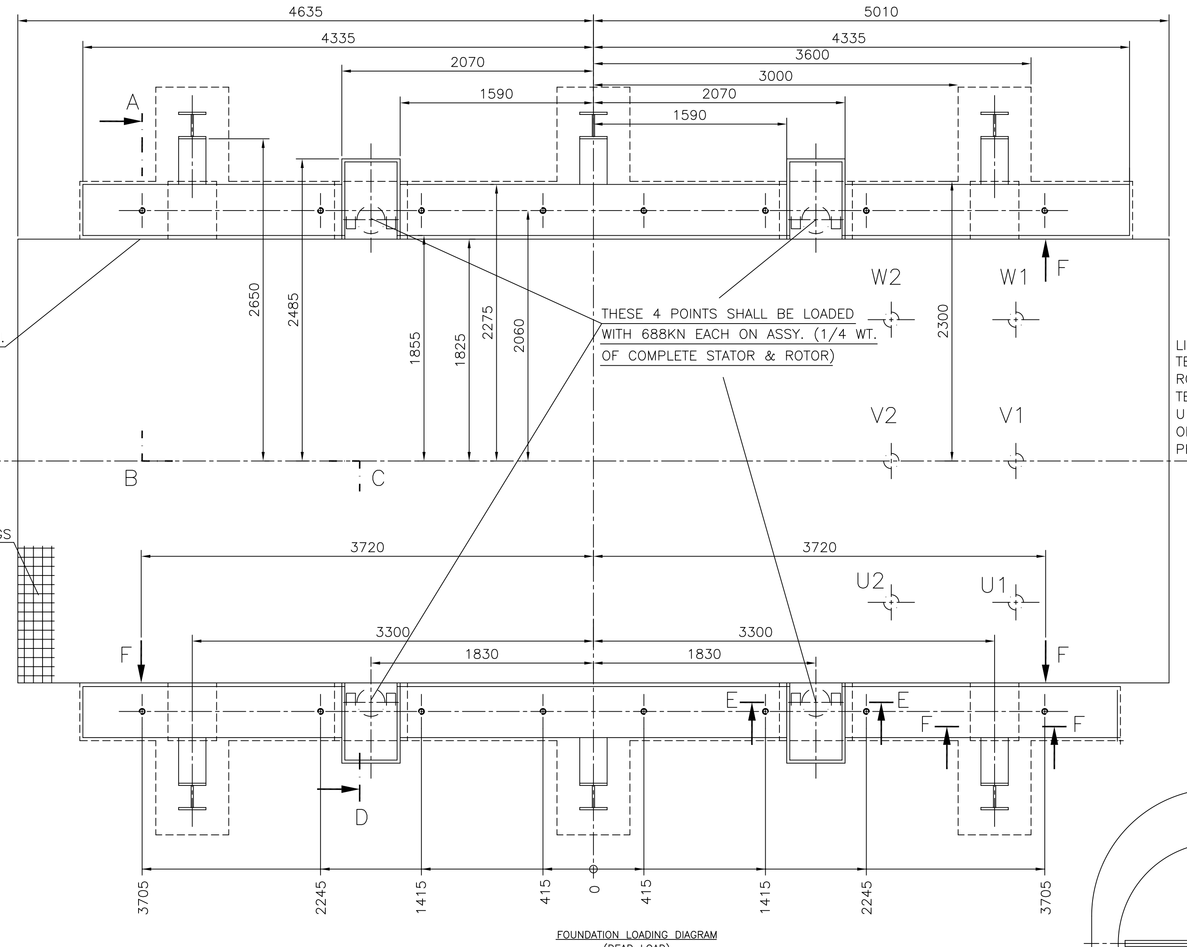
VIEW FROM 'TE' (SECTION A-B-C-D)



SECTION E-E (SCALE 1:10)



DETAIL 'A'



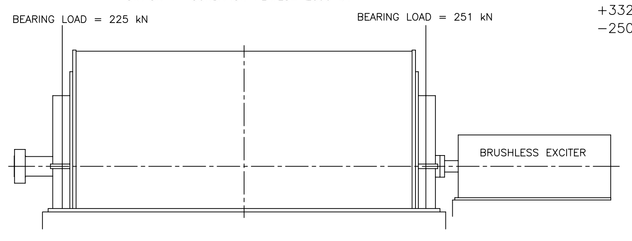
APP. 344.5 kN FOR LATERAL ALIGNMENT OF GEN.

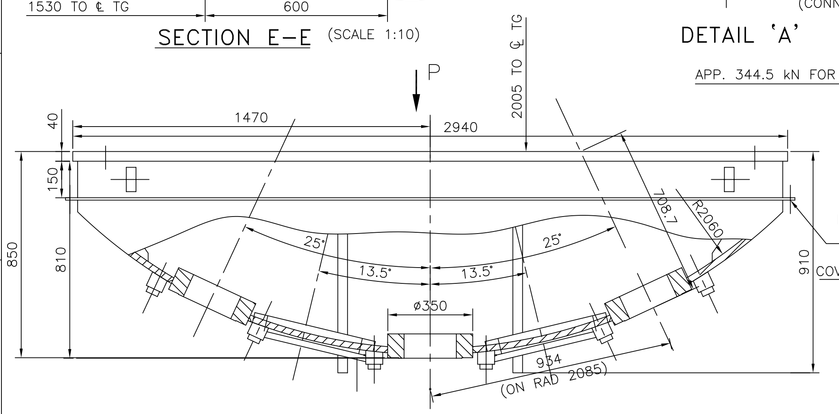
FOUNDATION LOADING DIAGRAM
(DEAD LOAD)

STATOR + FOUNDATION PLATES= 2390 kN

BEARING LOAD = 225 kN

BEARING LOAD = 251 kN

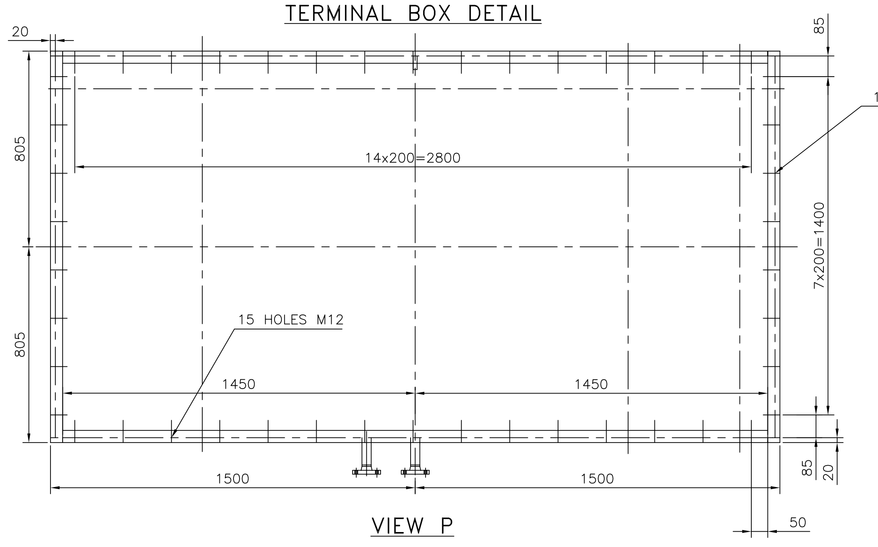




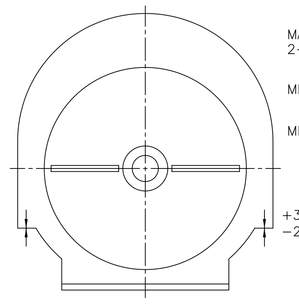
TERMINAL BOX DETAIL

FOR MOUNTING OF RUBBER FLAP OF BUS DUCT

COVER OF FOUNDATION OPENINGS



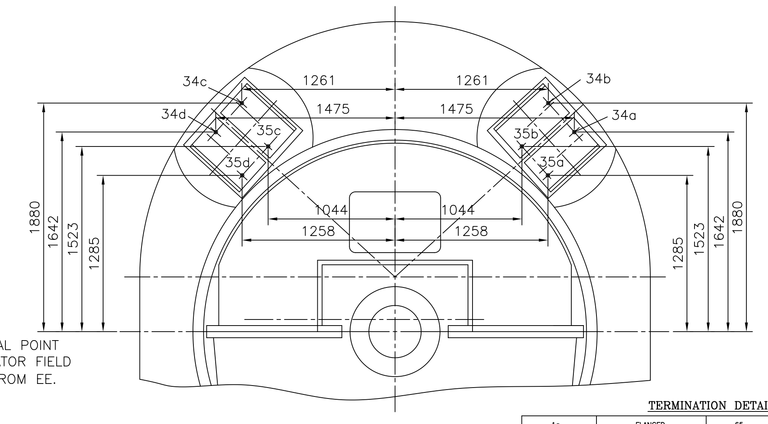
VIEW P



LINE TERMINALS ARE MARKED U1,V1,W1. NEUTRAL POINT TERMINALS ARE MARKED U2,V2,W2. THE GENERATOR FIELD ROTATES IN CLOCKWISE DIRECTION AS SEEN FROM EE. TERMINAL VOLTAGE GETS POSITIVE MAXIMUM IN U1,V1,W1 SEQUENCE.
ONLY FLEXIBLE CONNECTIONS ALLOWED.
PHASE SEQUENCE: U1-V1-W1

NAME/RATING PLATE DETAILS

K.W.	270000
P.F.	0.85 LAG
K.V.A.	317650
STATOR VOLTS	16500
STATOR AMPS	11115
ROTOR VOLTS	325
ROTOR AMPS	2666
RPM	3000
HZ	50
PHASE	3
CONNECTION	YY
COOLANT	HYDROGEN
INSULATION CLASS	F
GAS PRESSURE	4 BAR (G)



VIEW FROM 'EE'

SHORT-CIRCUIT FORCES: WEIGHTS CONSIDERED
MAX. FORCE CALULATED FROM MAX. MOMENT FOR A 2-POLE TERMINAL SHORT-CIRCUIT AT 100% NOM. VOLTAGE. ANY ALLOWANCES NOT INCLUDED. THE FORCES ARE AS SHOWN ALTERNATING FORCES, INDEPENDENT OF THE DIRECTION OF ROTATION.

SHORT-CITCUIT + 1/2 GEN. WEIGHT = FOUNDATION LOAD LOAD

1910kN	+	1410 kN	=	3320 kN
-1910 kN	+	1410kN	=	-500 kN

MASS MOMENT OF INERTIA OF STATOR AT IST LONG AXIS 458×10^3 kgm²
MASS MOMENT OF INERTIA OF ROTOR 5330 kgm²

FOUNDATION LOAD AT SHORT-CIRCUIT (ALTERNATING FORCES)

MAX. SHORT CIRCUIT TORQUE AT 2-POLE TERMINAL FAULT (t IN s; M IN kNm)

$Mk = 5582e^{-t/0.2344} \times \sin(wt - 2791e^{-t/0.2367} \times \sin 2wt + 814e^{-t/0.2602})$

Mk=7842kNm

WEIGHT:

STATOR SHIPPING WEIGHT	228.0 Mg
COOLERS	8.6 Mg
END SHIELD & COMPLETING ASSEMBLIES	23.3 Mg
ROTOR	42.915 Mg
TOTAL WEIGHT OF GENERATOR	297.5 Mg
BRUSHLESS EXCITER ASSEMBLY	30.4 Mg

TERMINATION DETAILS

1a	FLANGED	65	INLET BRG. OIL TE
1b	FLANGED	65	INLET BRG. OIL EE
2a	FLANGED	150	OUTLET BRG. OIL TE
2b	FLANGED	150	OUTLET BRG. OIL EE
3a	FLANGED	15	JACKING OIL INLET TE
3b	FLANGED	15	JACKING OIL INLET EE
4a	FLANGED	40	INLET SEAL OIL TE
4b	FLANGED	40	INLET SEAL OIL EE
6a	FLANGED	15	RING RELIEF TE
6b	FLANGED	15	RING RELIEF EE
7a	FLANGED	50	OUTLET S.O. TE H2 SIDE
7b	FLANGED	50	OUTLET S.O. EE H2 SIDE
8a	FLANGED	50	OUTLET S.O. TE AIR SIDE
8b	FLANGED	50	OUTLET S.O. EE AIR SIDE
9a	FLANGED	65	EXHAUST BRG. CHAMBER TE
9b	FLANGED	65	EXHAUST BRG. CHAMBER EE
15	FLANGED	50	CONNECTION FOR CO2
16	FLANGED	50	CONNECTION FOR H2
17	FLANGED	25	PRESSURE BEFORE FAN
18	FLANGED	25	PRESSURE AFTER FAN
19	FLANGED	50	CONN. TO GAS DRIER
20	FLANGED	50	CONN. FROM GAS DRIER
21	FLANGED	50	TO LIQUID DETECTOR RACK
24	WELDED	25	TO LIQUID DETECTOR RACK
25	WELDED	25	TO LIQUID DETECTOR RACK
30a,31a,32a,33a	FLANGED	100	COOLING WATER INLET TO H2 COOLER
30b,31b,32b,33b	FLANGED	100	COOLING WATER OUTLET FROM H2 COOLER
34a,34b,34c,34d	THREADED	G1/2"	VENT COOLERS A,B,C,D
35a,35b,35c,35d	THREADED	G1/2"	DRAIN COOLERS A,B,C,D

GRADE OF UNTOL. DIM.:-	GRADE OF UNTOL. DIM.:-
M/CG- V/C/M/F AA 0230208	M/CG- V/C/M/F AA 0230208
WELDING-A/B/C/D-AA621104	WELDING-A/B/C/D-AA621104
GAS CUTTING-"T3"AA0621101	GAS CUTTING-"T3"AA0621101
REV. DATE ALTERED CHECKED	REV. DATE ALTERED CHECKED

CBOM NO.			STATUS OF DRG.
AGREED DEPT.	NAME	SIGN	DATE
REV. DATE ALTERED CHECKED			

OWNER: INDIABULLS POWER LIMITED

EPC CONTRACTOR: ELENA POWER & INFRASTRUCTURE LIMITED

OWNER'S ENGINEER: TCE Consulting Engineers Limited BANGALORE

AMRAVATI 5X270 MW THERMAL POWER PROJECT
AMRAVATI, MAHARASTRA

BHARAT HEAVY ELECTRICALS LTD. HARDWAR

	NAME	SIGN	DATE
DRN	ASHISH	sd/-	10.02.10
CHD	RC SHARMA	sd/-	10.02.10
APD	RAKESH KR.	sd/-	10.02.10

NO.OF VAR.

DEPT. EME
CODE 4033
SCALE 1:25
WEIGHT(Kg.) -
REF. TO ASSY. DRG. -
ITEM NO.
NO.OF ITEMS

TITLE: GENERATOR OUTLINE

DRAWING NO. 0-139-00-01367 REV
SHEET NO.01 NO.OF SHEETS 01

SIZE A0

REF. DRG NO.
SIGN & DATE
INVENTORY NO.