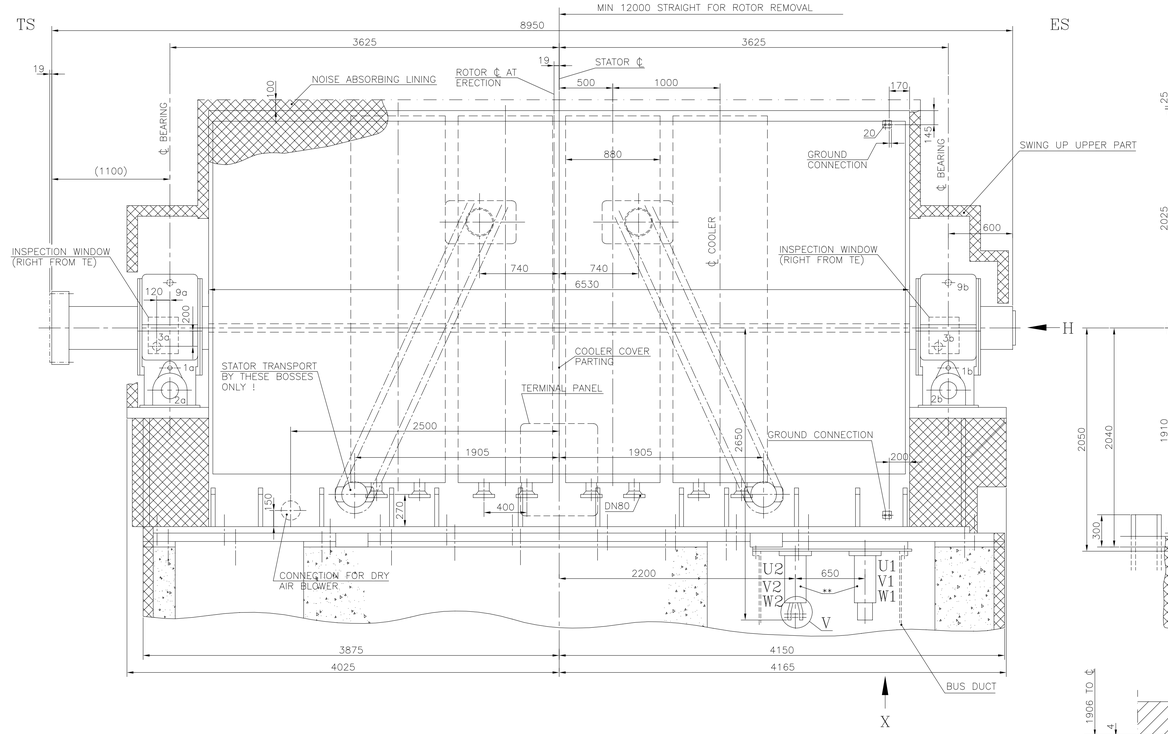
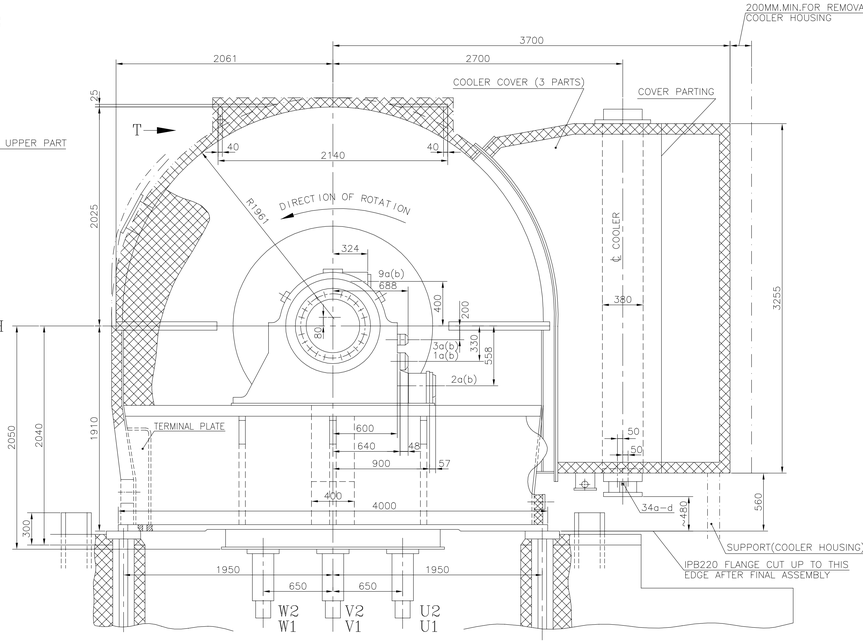




SHORT CIRCUIT TORQUE

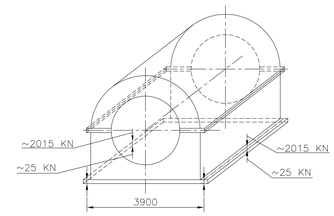
$MK = 2840\ e^{-t/0.206} \sin wt - 1420\ e^{-t/0.177} \sin 2wt + 544\ e^{-t/0.247}$

MAX. TORQUE – 4095 KN–M

MOMENT OF STATOR INERTIA – 240000 Kg m2

FOUNDATION LOADS AT SHORT CIRCUIT (ALTERNATING FORCES)

MAX. FORCE CALCULATED FROM THE MAX. TORQUE FOR A TWO POLE TERMINAL FAULT AT 100% NOM. VOLTAGE. ALLOWANCES ARE NOT INCLUDED. THE FORCES COME UP ALTERNATINGLY, INDEPEDENT OF THE REL. DIRECTION OF ROTATION.



SHORT CIRCUIT LOAD + GENERATOR WEIGHT=FOUNDATION LOAD
~ + 995 KN + 1020 KN = 2015KN
~ – 995 KN + 1020 KN = 25KN
SHORT CIRCUIT FORCES UNDER CONSIDERATION OF WEIGHTS

TYPE		TARI 108/36
RATING	BASE LOAD	126.20 MW AT 34°C AMBIENT
VOLTAGE		10.5 KV±5%
CURRENT (BASE LOAD)		8164 Amp.
POWER FACTOR		0.85 LAG
OPERATING SPEED		50 s^{-1}
QUANTITY OF LUBRICATING OIL		1.67dm^3/S (EACH)
BEARING TE,EE		
PRESSURE OF LUBRICATING OIL		0.2–0.5 BAR
QUANTITY OF JACKING OIL TE,EE		0.117 dm^3/s EACH AT 98.9 BAR
BEARING FRICTION LOSS		30 KW,EACH
ROTOR MASS MOMENT INERTIA GEN.		5325 Kg m^2
CRITICAL SPEED		21.4 S^{-1}
AIR REQUIREMENT OF GENERATOR		52 m^3/s
VOLUME OF LEAKAGE AIR		5%
WEIGHTS:–		
WEIGHT OF STATOR COMPL. (INCLU.ROTOR)		207 T
WEIGHT OF ROTOR		37 T
MAXIMUM CRANE LOAD (STATOR ONLY)		170 T
AIR VOLUME OF GENERATOR		74 m^3

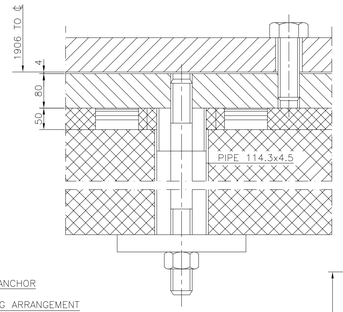
NOTES:–

1. ADDTIONAL WEIGHT ON TERMINAL BUSHINGS IS NOT ALLOWED.
2. THIS DRAWING GIVES ONLY DESIGN DIMENSIONS. FRAME DISPLACMENT WITH RESPECT TO THERMAL EXPANSION OF THE GENERATOR ROTOR OR TURBINE THRUST HAVE BEEN ROUGHLY TAKEN INTO ACCOUNT. CARRY OUT ASSEMBLY ACCORDING TO DRAWING AXIAL ROTOR CLEARANCES.
3. THE LINE TERMINALS ARE DESIGNATED U1,V1,W1. WITH THE CORRESPONDING NEUTRAL TERMINALS DESIGNATED U2,V2,W2. THE VOLTAGE REACHES ITS POSITIVE MAXIMUM VALUE AT THE TERMINALS IN THE ORDER OF U1,V1,W1.
** REMOVE TERMINAL BUSHINGS DURING TRANSPORT.

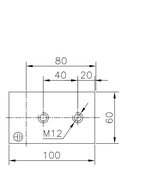
THERMAL EXPANSION

NORMAL = 17 mm (TOWARDS TG)
MAXIMUM = 29.5 mm (TOWARDS TG)
= 5 mm (TOWARDS TURBINE)

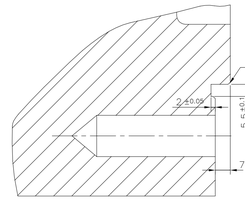
COUPLING DETAILS AS PER VIEW H ARE SUITABLE FOR EXCITER MODULE BEX.54/34–30/6–4.



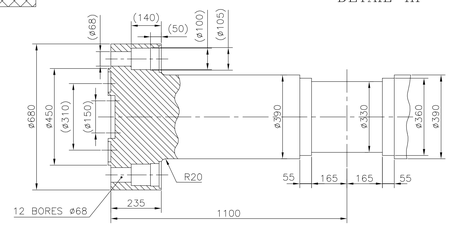
SECTION A–A
SCALE 1:5



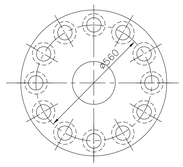
VIEW–T
SCALE 1:2.5
GROUND CONNECTION

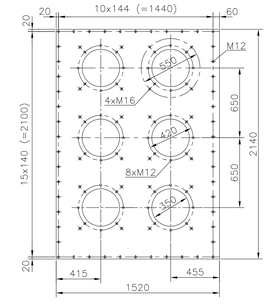


DETAIL–III

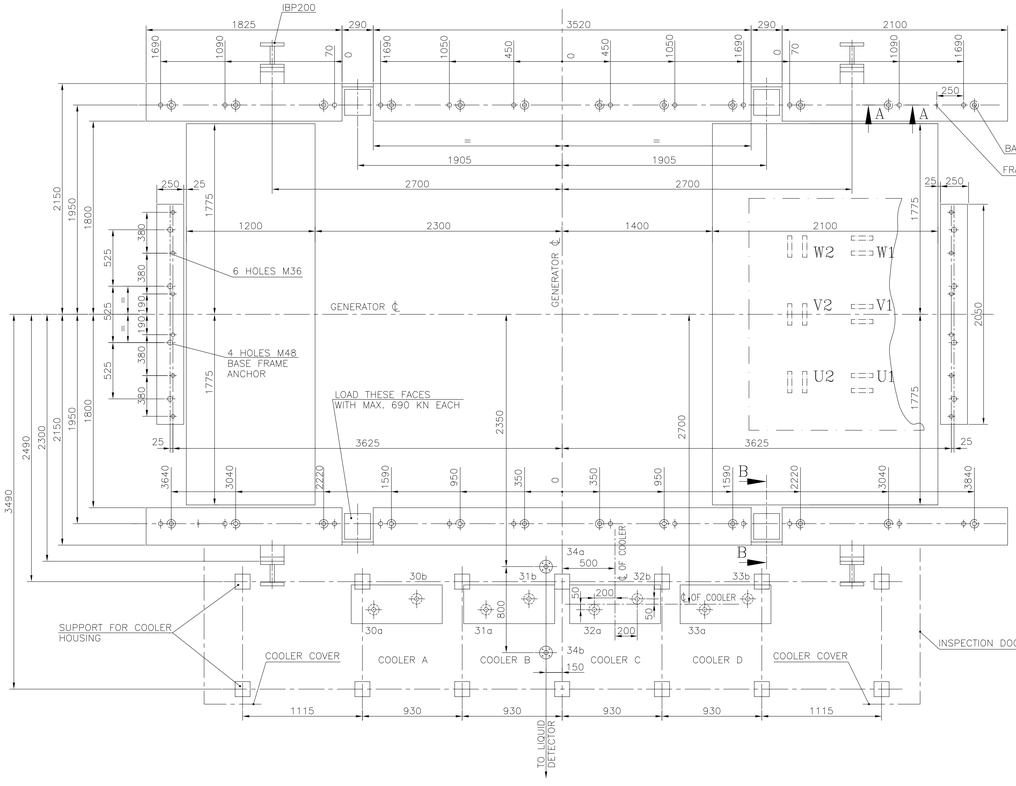


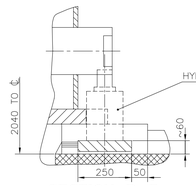
COUPLING AND FRONT TE BEARING JOURNAL
SCALE 1:10



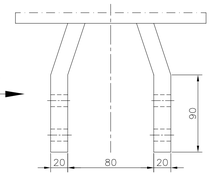


VIEW–X
CONNECTION FOR BUS CONDUIT

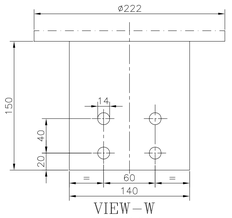




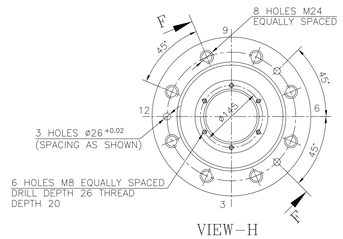
SECTION B–B
SCALE 1:10



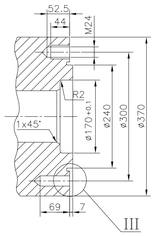
DETAIL–V
SCALE 1:2.5



VIEW–W
SCALE 1:2.5



VIEW–H
(SCALE 1:5)



SECTION F–F
SCALE 1:5

GMS NO. –			
ADDED/ DEPT.	NAME	SING.	DATE

GRADE OF UNTOL DIM:–
M/CGK/G/M/F AA0230208
WELDING A/B/C/D/–AA621104
GAS CUTTING–'T3' AA0621101

REV.	DATE	ALTERED CHECKED	REV.	DATE	ALTERED CHECKED

TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT: TARI 108/36–STG; RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD. 330 MW DHOLPUR CCPP

BHARAT HEAVY ELECTRICALS LTD. HARDWAR

	NAME	SIGN	DATE	NO.OF VAR.
DRN	PAB	sd/–	19.11.04	
CHD	R.C.SHARMA	sd/–	19.11.04	
APD	K.R.GUPTA	sd/–	22.11.04	73, 74

DEPT. TGE	SCALE 1:20	WEIGHT(Kg.) –	REF.TO.ASSY.DRG. –	ITEM NO. –	NO.OF ITEMS –
CODE 4133					75, 77

TITLE: GENERATOR OUTLINE (STG)

DRAWING NO. 0–139–12–01099 (22,23,24)

SHEET NO. 1 NO.OF SHEETS 1

SIZE A0

INVENTORY NO. | SIGN & DATE | REF. DWG NO.