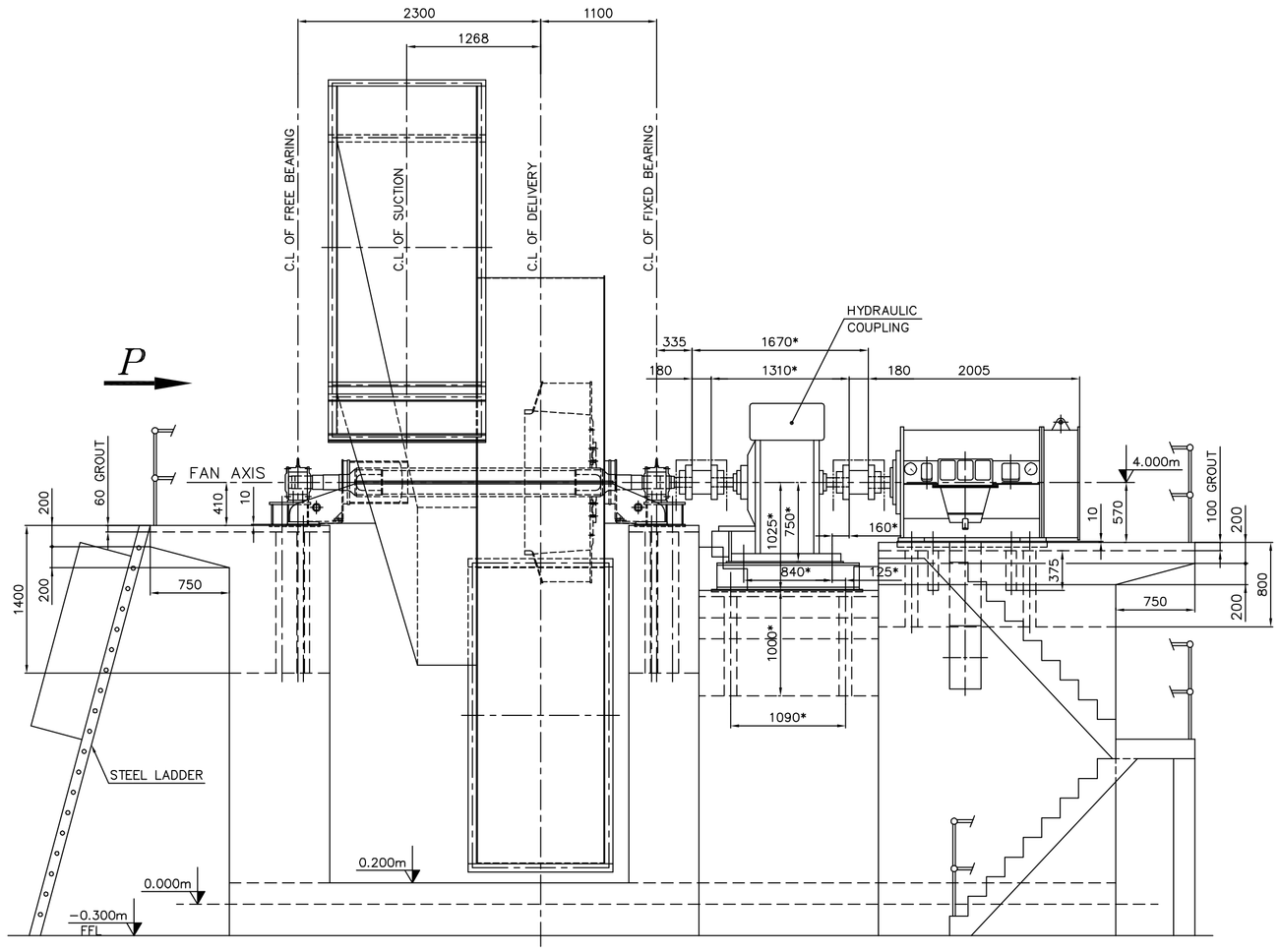
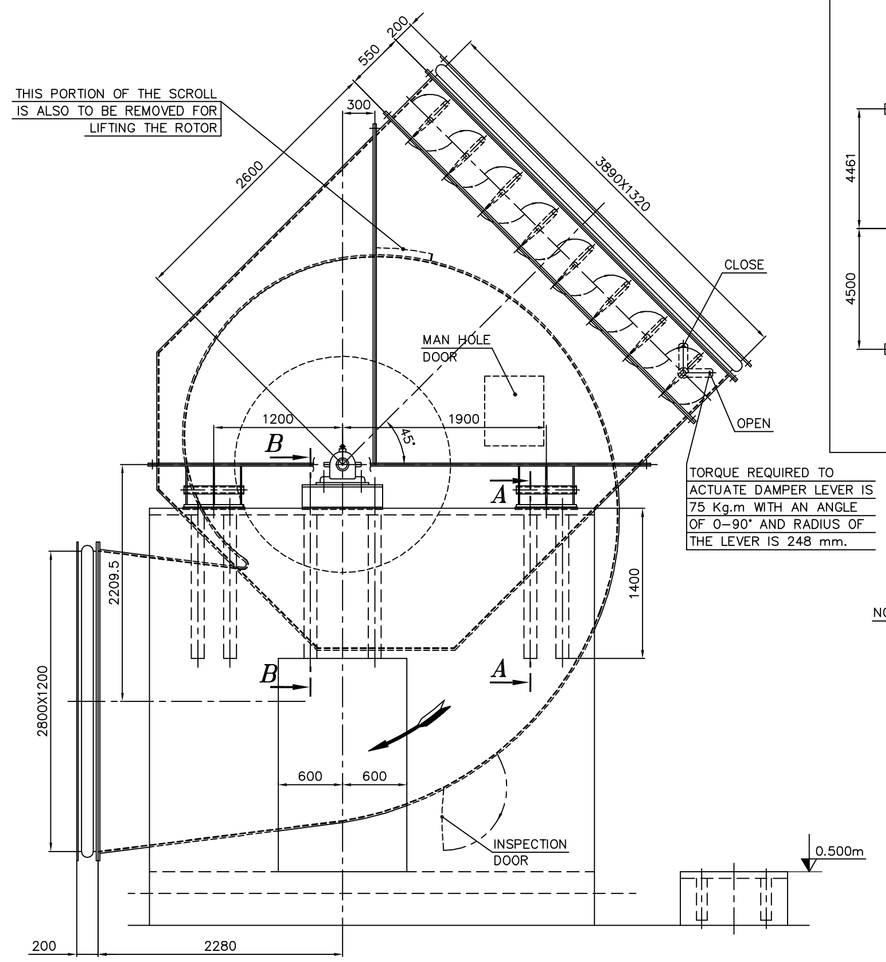


VIEW–P

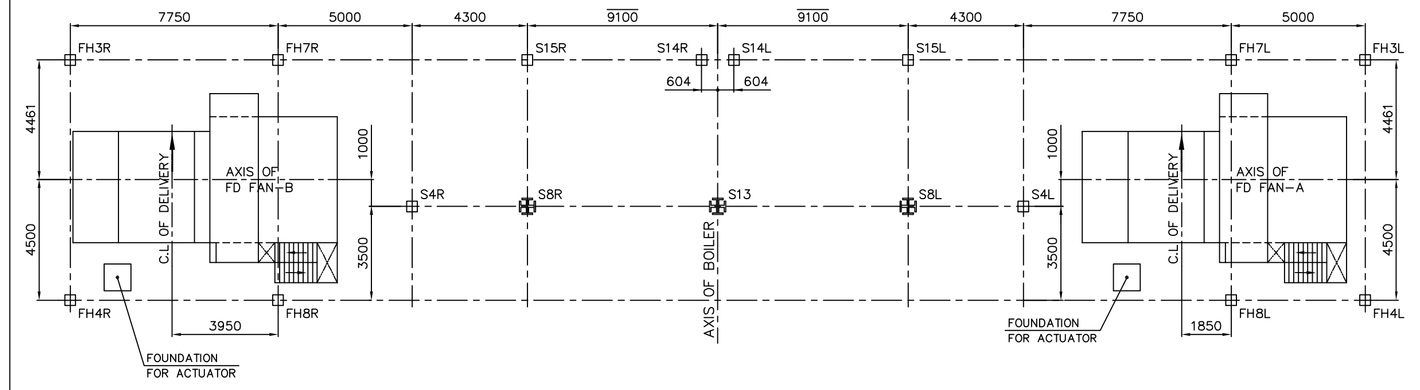
(WITHOUT HYD. COUPLING, MOTOR & ITS FOUNDATION)



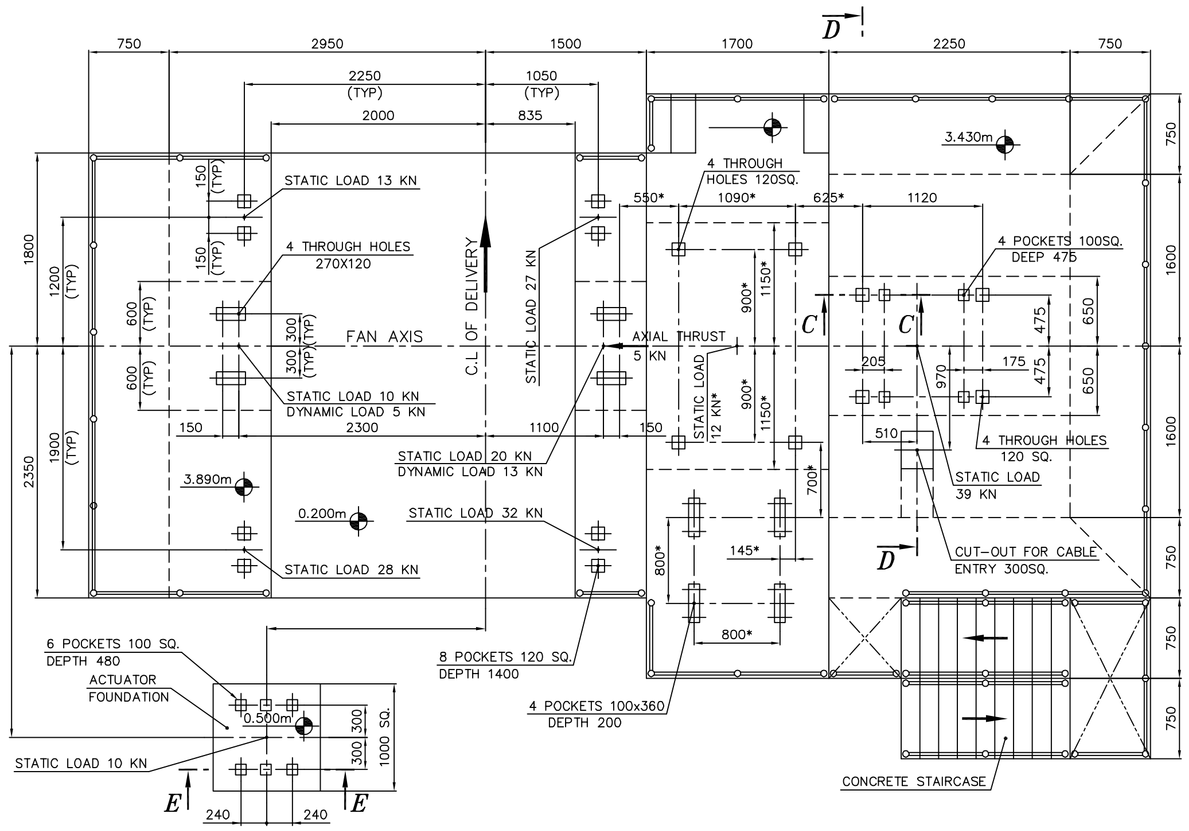
TORQUE REQUIRED TO ACTUATE DAMPER LEVER IS 75 Kg.m WITH AN ANGLE OF 0–90° AND RADIUS OF THE LEVER IS 248 mm.

KEY PLAN

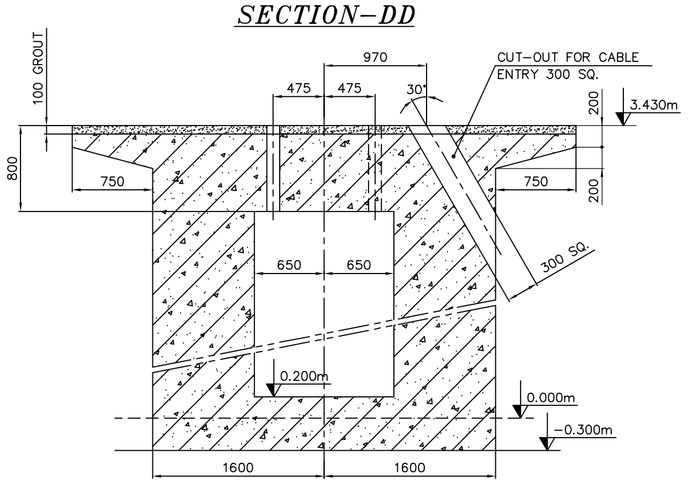
BHEL/TRICHY REFERENCE DRG. 0–00–515–93628 (LAYOUT OF COLD AIR DUCTING)
(KEY PLAN SHOWN IS INFORMATIVE ONLY. FOR EXACT LOCATION REFER BOILER LAYOUT DRAWINGS.)



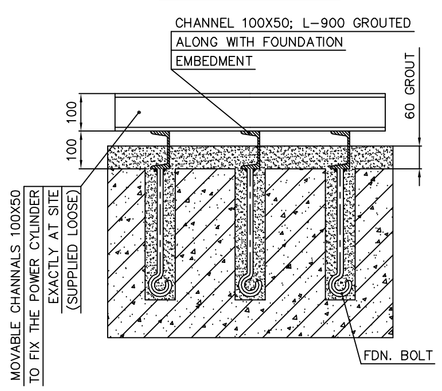
FOUNDATION PLAN



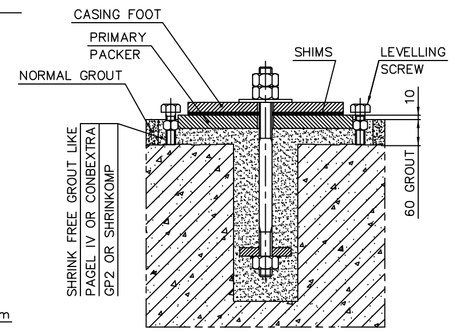
SECTION–DD



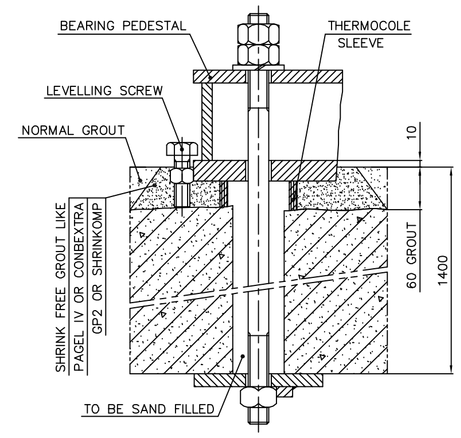
SECTION–EE



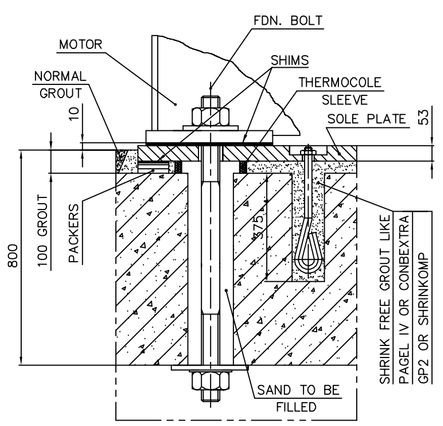
SECTION–AA



SECTION–BB



SECTION–CC



DIMENSIONS / ITEMS MARKED WITH "*" WILL BE CONFIRMED LATER.

NOTES:–

01. THE LOADS INDICATED ON FOUNDATION ARE WITHOUT ALLOWANCES FOR VIBRATIONS. CIVIL DESIGNERS/CONSULTANTS ARE RESPONSIBLE FOR PROPER DESIGN OF FOUNDATION TAKING INTO ACCOUNT OF THE ALLOWANCES FOR VIBRATION ALSO.
02. THE NATURAL FREQUENCY OF THE FOUNDATION SHOULD BE MINIMUM ±20% AWAY FROM THE OPERATING FREQUENCY OF THE FAN. THE NATURAL FREQUENCY OF THE CONNECTING DUCT AND SUPPORTING STRUCTURE SHOULD BE CLEARLY AWAY FROM THE OPERATING FREQUENCY OF THE FAN.
03. ADOPT IS : 2974 / PART–IV FOR THE FOUNDATION DESIGN.
04. THE CONNECTING DUCTS AT INLET AND OUTLET OF FAN MUST BE SELF SUPPORTED AND SHOULD NOT BE WELDED WITH EXPANSION JOINTS.
05. FOUNDATION POCKETS SHOULD BE PERPENDICULAR TO THE FLAT SURFACES OF FOUNDATION.
06. ACCURATE TEMPLATES SHALL BE USED FOR LOCATING CORES FOR POCKET HOLES TO ENSURE THEIR DIMENSIONAL ACCURACY.
07. TOLERANCE BETWEEN ANY TWO POCKET CENTRES IS ±5 mm.
08. TOLERANCE ON CONCRETE LEVELS $^{+0}_{-25}$ mm.
09. IN AREAS WHERE SOLE PLATES AND ANCHOR PLATES ARE TO BE INCORPORATED IN FOUNDATION CONCRETE, THE SIZE OF THE COARSE AGGREGATE USED SHALL NOT EXCEED 20 mm AND DOWN GRADED TO FACILITATE CHIPPING AND SCRAPPING AND THEREBY ENSURING MAXIMUM CONTACT ON THE MATING AREAS.
10. NON–SHRINK GROUT IS TO BE USED. REFER GENERAL SPECIFICATIONS ISSUED BY BHEL/RANIPET FOR NON–SHRINK GROUT. THIS ALSO CONTAINS THE PREPARATIONS OF PRIMARY PACKERS & SHIMS.
11. GROUTING SHOULD BE DONE ONLY AFTER FINAL ALIGNMENT OF FAN.
12. ELEVATIONS & POCKET DEPTH SHOWN IN FOUNDATION PLAN INCLUDING GROUTING THICKNESS.
13. GROUTING IS IN THE SCOPE OF ERECTION GROUP/CONTRACTOR.
14. HANDRAILS, STEEL PLATFORMS, STEEL LADDER, CANOPY OF MOTOR & THEIR EMBEDMENTS ARE IN THE SCOPE OF BHEL/TRICHY.
15. FAN FOUNDATION SHOULD NOT BE USED AS SUPPORT FOR OTHER STRUCTURES OR EQUIPMENTS.
16. FOUNDATION CONFIGURATION SHOWN IN THIS DRAWING IS ONLY INFORMATIVE/TYPICAL. TYPE AND DETAILS OF FOUNDATION ARE TO BE FINALISED BY CIVIL DESIGNERS/CONSULTANTS AND CUSTOMERS.
17. FOR MOTOR ERECTION, REFER MOTOR SUPPLIER'S ERECTION MANUAL.
18. SOLE PLATE, FOUNDATION BOLTS & FASTENERS RELATED TO MOTORS WILL BE IN THE SCOPE OF MOTOR SUPPLIER (BHEL BHOPAL UNIT)

FAN DETAILS:–

TYPE	: NDV 20 C2
WEIGHT OF FAN WITHOUT MOTOR & COUPLING	: 15000 Kg
WEIGHT OF ROTATING PARTS OF FAN	: 2000 Kg
GD^2 OF FAN	: 3600 $Kg.m^2$
SPEED OF FAN	: VARIABLE (500 TO 980 RPM)
NO. OF FANS PER BOILER	: TWO (BOTH IDENTICAL)
MAX. WEIGHT TO BE HANDLED FOR MAINTENANCE	: 3850 Kg

MOTOR DETAILS:–

MAKE		: M/s. BHEL/BHOPAL
TYPE		: SQ. CAGE INDUCTION, 1LA7562–6, TETV, IP–55, B3
RATING		: 310 KW/988 RPM/6600 V/ 3Ø/ 50 Hz
WEIGHT OF MOTOR		: 3850 Kg
WEIGHT OF ROTATING PARTS		: 750 Kg
GD^2 OF MOTOR		: 76 $Kg.m^2$
MOTOR DRG. NO.		: 3 402 00 46286 Sh. 01 OF 06
MAX. FOUNDATION LOADING (ALTERNATING)		: 29 kN UPWARDS
PER MOTOR LONGITUDINAL SIDE		: 66 kN DOWNWARDS
BEARINGS	D.E	: NU224M+6224C3
	N.D.E	: NU222M
LUBRICATION		: GREASE (SERVOGEM–3 OR EQUIVALENT)

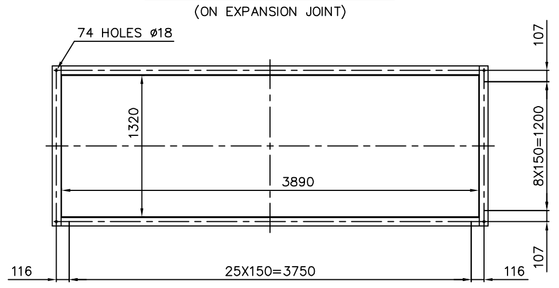
HYDRAULIC COUPLING DETAILS:–*

TYPE	:
MAKE	:
TOTAL WEIGHT WITHOUT OIL	:
WEIGHT OF ROTATING PARTS WITH OIL	:
REQUIRED OIL VISCOSITY	:
MOMENT OF INERTIA (J) :	
PRIMARY WITH OIL	:
SECONDARY WITH OIL	:

SHALL BE FURNISHED LATER

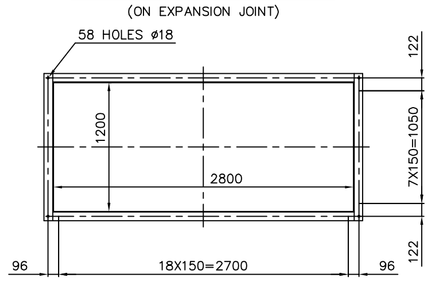
SUCTION FLANGE

(ON EXPANSION JOINT)

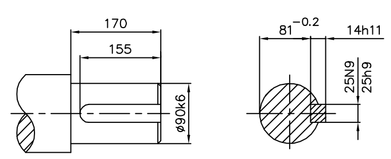


DELIVERY FLANGE

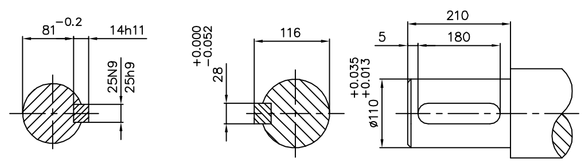
(ON EXPANSION JOINT)



FAN SHAFT END



MOTOR SHAFT END



CUSTOMER NO : R132

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CLIENT	COMPAGNIE D'E'LECTRICITE' DU SENEGAL SA, SENEGAL
PROJECT	1x125MW THERMAL POWER PLANT, SENEGAL
EPC CONTRACTOR	promac ENGINEERING INDUSTRIES. LTD. BANGALURU
CONSULTANT	POWERTEC ENGINEERING PVT. LTD. CHENNAI.
	BHARAT HEAVY ELECTRICALS LTD. BOILER AUXILIARIES PLANT RANIPET – 632 406
DRAWN	P.S.N
CHECKED	SANDEEP
APPROVED	V.P.S
DATE	17.08.13
ALL DIMENSIONS ARE IN MILLIMETRES	
SCALE	1:40
TITLE	GENERAL ARRANGEMENT OF FD FAN NDV 20
DRAWING No.	1–00–098–28867
REV.	00
EPCC DRG No:	

Size A1