



- NOTES:-**
- THE LOADS INDICATED ON FOUNDATION ARE WITHOUT ALLOWANCES FOR VIBRATIONS. CIVIL DESIGNERS ARE RESPONSIBLE FOR PROPER DESIGN OF FOUNDATION TAKING INTO ACCOUNT OF THE ALLOWANCES FOR VIBRATION ALSO.
 - THE DIFFERENT NATURAL FREQUENCIES OF THE FOUNDATION HAVE TO BE 20% AWAY FROM THE SPEED FREQUENCY, $f_{nmax} = n/60$ AND 15% AWAY FROM THE DOUBLE OF THE SPEED FREQUENCY, $2 \times f_{nmax}$. THIS MEANS: $0.8 \times f_n$ TO $1.2 \times f_n$ AND $0.85 \times (2 \times f_n)$ TO $1.15 \times (2 \times f_n)$. SPEED FREQUENCY $f_{nmax} = 16.5$ HZ ($2 \times f_{nmax} = 33.00$ HZ)
 - THE STIFFNESS OF THE FOUNDATION HAS TO BE AT LEAST OF $> 1.0E+06$ N/mm FOR EACH LOAD POINT OF THE FAN IN LONGIDUAL TRNSVERSAL AND VERTICAL DIRECTIONS RELATING TO THE FAN AXIS. IT HAS TO BE TAKEN INTO CONSIDERATION THAT ON SETTLING THE FOUNDATION THE TOTAL NATURAL FREQUENCIES OF THE FOUNDATION CAN ARISE DUE TO THE SOIL COMPACTION AND THE RESULTING INCREASES OF THE ELASTIC MODULUS. AN UNEVEN SETTLING OF THE FOUNDATION HAS TO BE EXCLUDED.
 - THE RATIO OF THE FOUNDATION MASS TO THE ROTOR MASS HAS TO BE GREATER THAN 25.
 - ADOPT IS: 2974 / PART-IV FOR THE FOUNDATION DESIGN.
 - THE CONNECTING DUCTS AT INLET AND OUTLET OF FAN MUST BE SELF SUPPORTED AND SHOULD NOT BE WELDED WITH EXPANSION JOINTS.
 - FOUNDATION POCKETS SHOULD BE PERPENDICULAR TO THE FLAT SURFACES OF FOUNDATION.
 - ACCURATE TEMPLATES SHALL BE USED FOR LOCATING CORES FOR POCKET HOLES TO ENSURE THEIR DIMENSIONAL ACCURACY.
 - TOLERANCE BETWEEN ANY TWO POCKET CENTRES IS ± 5 mm.
 - TOLERANCE ON CONCRETE LEVELS -25 mm.
 - 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 FACILIATE CHIPPING AND SCRAPPING AND THEREBY ENSURING MAXIMUM CONTACT ON THE MATING AREAS.
 - 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.
 - GROUTING SHOULD BE DONE ONLY AFTER FINAL ALIGNMENT OF FAN.
 - ELEVATIONS & POCKET DEPTH SHOWN IN FOUNDATION PLAN ARE INCLUDING GROUTING THICKNESS.
 - GROUTING IS IN THE SCOPE OF ERECTION / CONTRACTOR
 - HANDRAILS, STEEL PLATFORMS, LADDERS & CANOPY FOR MOTOR AND THEIR EMBEDMENTS ARE IN THE SCOPE OF BHEL/TRICHY.
 - FAN FOUNDATION SHOULD NOT BE USED AS SUPPORT FOR OTHER STRUCTURES OR EQUIPMENTS.
 - FOUNDATION CONFIGURATION SHOWN IN THIS DRAWING IS ONLY INFORMATIVE/TYPICAL. TYPE AND DETAILS OF FOUNDATION ARE TO BE FINALISED BY CIVIL DESIGNERS (PEM, BHEL).
 - FOR MOTOR ERECTION, REFER MOTOR SUPPLIER'S ERECTION MANUAL.
 - BASE FRAME, SOLE PLATE, FOUNDATION BOLTS & FASTENERS RELATED TO MOTORS WILL BE IN THE SCOPE OF MOTOR SUPPLIER (BHEL BHOPAL UNIT)

FAN DETAILS:	
TYPE	: FAF 24.5/11.8-1
NO. OF FANS PER BOILER	: TWO (IDENTICAL)
WEIGHT OF ROTATING PARTS	: 2116 kg
MAX.WEIGHT TO BE HANDLED	: 3500 kg
GD ² OF FAN	: 1400 kg.m ²
SPEED OF FAN	: 990 RPM

MOTOR DETAILS:	
MAKE	: M/s. BHEL/BHOPAL
TYPE	: 1LA7802-6P, TETV, IP55, B3
CAPACITY	: 1450 KW / 994 RPM
WEIGHT OF MOTOR	: 9500 KG
WEIGHT OF ROTATING PARTS	: 2300 KG
GD ² OF MOTOR	: 396 Kg.m ²
MOTOR DRAWING NUMBER	: 34020045586
MAXIMUM FOUNDATION LOADING ALTERNATING	: 127 kn UPWARDS
PER MOTOR LONGITUDINAL SIDE	: 217 kn DNWARDS

CUSTOMER NO. : R547-R548

WEST BENGAL POWER DEVELOPMENT CORPN. LTD.,

SAGARDIGHI THERMAL POWER PROJECT

2 X 500 MW BOILER - PHASE-II, UNIT NO. 3&4

BHARAT HEAVY ELECTRICALS LIMITED.,

BOILER AUXILIARIES PLANT; RANIPET-632406

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REV.

DATE

ALTERED

CHD. & APPD.

NAME

S.S.B

P.M.J

P.M.J

SIGN

DATE

20.07.2011

20.07.2011

20.07.2011

TITLE

GENERAL ARRANGEMENT OF F.D FAN - FAF 24.5/11.8-1

DRAWING NO.

1-00-098-22065

SCALE

1:35

CUSTOMER DRAWING NO.

SHEET

01 OF 01

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Size A1