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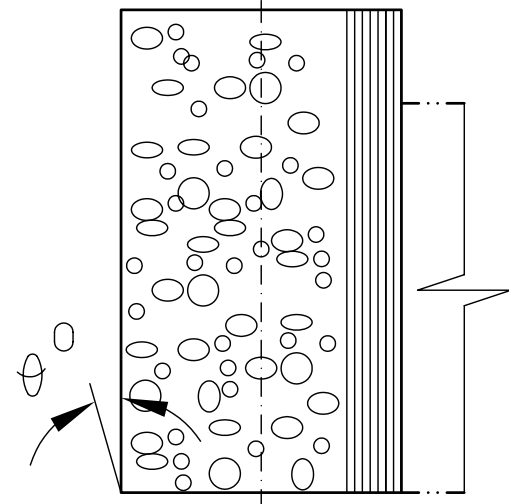
INVENTORY NO
SIGN AND DATE
REF. DRG. NO.
COMPUTER FILE NAME

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

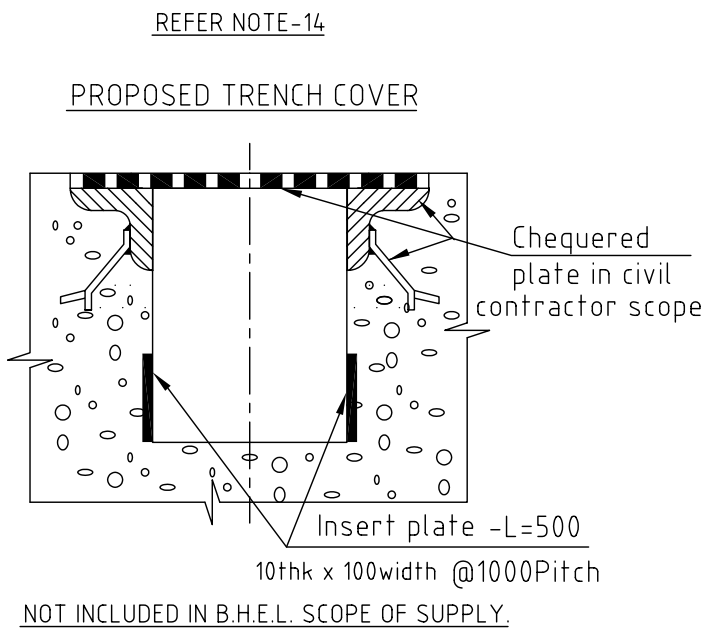
DRG. NO. HY-TC-MPA1024-0111				2		SH. OF 03	
A	TYPE OF TURBINE :-			NK 63/71-3			
	TYPE OF BOILER FEED PUMP :-			MDG 405(MHI)			
	TYPE OF BOOSTER PUMP :-			MLC 400X300H(MHI)			
	WEIGHT OF SINGLE HEAVIEST PIECE FOR						
		ERECTION in kg.		MAINTENANCE in kg.			
	TURBINE	60,327		14,000			
	BFP	21,600		3710			
	BP	6,150		1250			
B	DIRECTION OF ROTATION VIEWED FROM BOOSTER PUMP TO BFP FOR :-						
	TURBINE	-	CLOCKWISE				
	BFP	-	CLOCKWISE				
	BP	-	COUNTER CLOCK WISE				

DETAIL 'PED'



THE THICKNESS OF THE CONCRETE MEMBER MUST BE SUFFICIENT TO ENSURE THAT THE ANGULAR DEFLECTION DOES NOT EXCEED : 0.015 DEG. WITH THE HORIZONTAL FORCES SPECIFIED.

DETAIL 'TRENCH'



SPEEDS (RPM) ⚠

EQUIPMENT	RATED DESIGN	TRIP SPEED	CRITICAL SPEEDS
TURBINE	5695	6265	4050
BFP	5695	-	1184.7
BP	1495	-	3000

NOTE :- The installation details shown here are only informative. For final installation, ref. the Assembly drawings furnished alongwith the respective equipment.

FORCES ON FOUNDATION IN kgf

LOAD POINT	LOAD CONDITION						
	STATIC LOAD WITHOUT ROTATING WEIGHT	ROTATING WEIGHT	OPERATING WEIGHT OF CONDENSER/VACUUM PULL	SHORT CIRCUIT LOAD *	LOAD DUE TO OPERATING TORQUE	OPERATING UNBALANCE * DYN. LOAD (ROTATING)	FAILURE MODE LOAD ** (Turbine - Blade breakage)
	1	2	3	4	5	6	7
A	-	2920	-	-	-	1124	6744
A1	14375	-	1268	-	761	-	-
A2	14375	-	1268	-	-761	-	-
B	-	-	-	-	-	-	-
B1	15955	1555	14732	-	252	599	3594
B2	15955	1555	14732	-	-252	599	3594
C	1100	-	-	-	-	-	-
C1	-	110	-	-	-2140	43	258
C2	-	440	-	-	2140	45	270

FOUNDATION LOADING DATA

LOAD APPLICATION POINT	EQUIPMENT	WEIGHT		STATIC LOAD ON EACH POINT (kg's)		DYNAMIC LOAD ON EACH POINT (kg's)		
		DRY	WET	VERTICAL		VERTICAL	HORIZONTAL	AXIAL
5A	BOILER FEED PUMP (MDG 405)	21600	21850	1561		1742	1742	1161
3A	BOOSTER PUMP (MLC 400x300 H)	6150	6450	540		475	475	320

** At each supporting point acting in radial direction over 360 deg.
* Loads on either side of TG axis act in opposite directions and the direction changes at 50 cycles/sec.

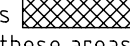
NOTE :-1. DOWNWARD FORCES ARE POSITIVE

2. GRADE OF BALANCING: BFP, BP-G2.5

3. MASS MOMENT OF INERTIA: BFP : 215 N-Sq.m
BP : 466 N-Sq.m

DETAILS FOR FOUNDATION CALCULATIONS

NOTES :-


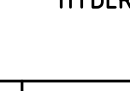
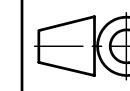
- All dimensions are in mm and elevations are in metres.
- This foundation drawing is only intended as basis for preparing the layout for foundation (by the BHEL). All civil structural dimensions are tentative and same shall be decided by the civil engineer concerned. The foundation design calculations shall consider all the static and dynamic loads acting simultaneously.
- Suitable earth quake coefficient applicable for the project site should be adopted for seismic design of foundation as per IS 1893.
- The foundation block should be designed so that natural frequencies of foundation are sufficiently away from the frequencies of machines. The design shall be as per DIN 4024 standard and IS 2974 part III.
- Design of the foundation shall consider the allowable limits of vibration behaviour of machines (Group - T) as per VDI 2056.
- Bearing failure loads are less than failure load condition loads specified in col. 7 of the "Forces on Foundation" table.
- Dynamic loads in axial direction are negligible.
- Magnitude of unbalanced forces can be taken in vertical and horizontal directions as equal.
- Max. live load on top of the deck is : 2000 kg./sq.m
- Foundation block must not be joined to any other structure to avoid vibration transmission.
- Portions shown thus  in top deck are filled with secondary grouting. The concrete surface in these areas is to be ensured free from dust, grease and oil. Any wooden plugs present in these areas are to be removed. The packing plates below the machine sole plates shall be embedded into a 20 mm thick layer of special grout (local to plates) and are to be levelled horizontally. later, total secondary grouting may be completed.
- For grouting instructions ref. TC-9-1901 (5 sheets). And for grouting cement specification ref. TC-9-1900.
- All embedded plates, angles, sleeves, pipes, ducts and any other structurals are not part of Turbine scope of supply unless otherwise specified.

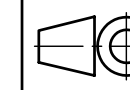
LPGL DRG.NO;BE-LAL-ECV-101-V-0009

LALITPUR SUPER THERMAL POWER PROJECT-3X660MW
LALITPUR, UTTAR PRADESH

OWNER:  LALITPUR POWER GENERATION COMPANY LTD

OWNER CONSULTANT:  TATA CONSULTING ENGINEERS
BANGALORE, INDIA

DRN.	NAME	SIGN	DATE	NO OF VAR.
CHD.	J.C.S/VVVKR		08.07.2011	
APPD.	G.N.PAWAR		08.07.2011	-N.A.-
	M.A.HASEB		08.07.2011	-N.A.-

DEPT.	UNTOL. DIMS. GR. EPMF	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO OF ITEMS
415		1:30	-N.A.-	-N.A.-	-N.A.-	-N.A.-

TITLE		CARD CODE	REV.
FOUNDATION ARRANGEMENT FOR BFP & DRIVE TURBINE		N.A.	
DRAWING NO.(1-313-01-02335)		HY-TC-MPA1024-0111	02
SHT. No. 03		NO. OF SHT. 03	

STATUS: PRELIMINARY



JCS