

TECHNICAL SPECIFICATIONS OF ACID CLEANING PUMP SETS.

I .PUMP

1	CAPACITY	200 TONS PER HOUR
2	TYPE	CENTRIFUGAL, HORIZONTAL SPLIT CASING, 2 STAGES
3	HEAD- DISCHARGE	200MWC
4	SUCTION	POSITIVE 1 METER
5	SPEED	SUITABLE AS PER DESIGN TO ACHIEVE THE ABOVE PERAMETERS
6	LIQUID TO BE HANDLED	WATER & WEAK ACID SOLUTION
7	ACID	HYDROCHLORIC ACID 6% CONCENTRATION
8	TEMPERATURE OF THE MEDIUM	MAXIMUM 95° C
9	EFFICIENCY	ABOVE 70%
10	TYPE OF GLAND SEALING	MEACHANICAL SEAL
11	SUCTION & DISCHARGE CONNECTION	SIDE SUCTION & DISCHARGE, VERTICAL
12	COUPLING	LOVE JOY COUPLING WITH COUPLING GUARD.
13	VIBRATION PAD	ANTI VIBRATION PAD FOR THE ENTIRE FRAME .
14	<u>VIBRATION LIMITS</u>	<u>40 microns</u>
15	<u>NOISE LEVEL</u>	<u>85 db</u>
16	<u>COUNTER FLANGES</u>	ONE SET EACH FOR PUMP SUCTION AND DISCHARGE FLANGES WITH FASTNERS AND GASKETS.
17	<u>FASTNERS</u>	<u>NON-CORROSIVE-HI TENSILE (EXCEPT SS)</u>

II. MOTOR AS PER IS :325

1	TYPE	SQUIRREL CAGE INDUCTION MOTOR
2	MAKE	SIEMENS OR CROMPTON GREEVES OR KIRLOSKER
3	KW	SUITABLE AS PER DESIGN
4	VOLTAGE	3 PHASE, 415 V +_ 10% 50HZ
5	RPM	SUITABLE AS PER DESIGN
6	INSULATION CLASS	'B'
7	ENCLOSURE	TEFC
8	TYPE OF COOLING	AIR
9	TERMINAL BOX FOR MOTOR	SUITABLE FOR ROTATION IN STEPS OF 90° TO 360
10	MOTOR PROTECTION	INSTANTANEOUS SHORT CIRCUIT PROTECTION FOR ALL PHASES.
11	DEGREE OF PROTECTION	IP-55
12	PULL OUT TORQUE	SHOULD NOT BE LESS THAN 200% of FULL LOAD TORQUE AT RATED VOLTAGE.
13	ACCELARATING TORQUE	AT ANY SPEED WITH LOWEST PERMISSIBLE STARTING VOLTAGE SHALL BE AT LEAST 10% OF MOTOR FULL LOAD TORQUE AT 2 POINTS.
14	MOTOR BODY EARTHING	AS PER IS 325
15	PERMISSIBLE NOISE LEVEL	AS PER IS 325
16	PERMISSIBLE VIBRATION LEVEL	AS PER IS 325

III.STARTER

1	TYPE	STAR DELTA STARTER. AUTOMATIC WITH OVER LOAD AND SINGLE PHASE PROTECTION WITH VOLT METER, AMMETER, WATT METER, SELECTOR SWITCH & INDICATING LAMPS
2	KW	SUITABLE AS PER DESIGN
3	MAKE	REPUTED MAKE

IV. MATERIAL SPECIFICATION FOR PUMP

1	CASING	ASTM A 216 GR WCB
2	IMPELLER	ASTM A 216 GR WCB
3	SHAFT	SS
4	SHAFT SLEEVE	SS

QUALITY PLAN FOR MOTOR:

1. TYPE TEST : T.C TO BE PROVIDED AS PER IS 325
2. ROUTINE TESTS : TO BE PERFORMED AS PER IS 325 & TCs TO BE FURNISHED.

PUMP.

1. RATED HEAD & CAPACITY TEST TO BE CONDUCTED AS PER THE TECHNICAL SPECIFICATION GIVEN FOR PUMP.
2. VIBRATION TEST/ NOISE LEVEL TEST TO BE CONDUCTED AS PER TECHNICAL SPECIFICATION
3. TCs FOR THE MATERIAL SPECIFICATION SHALL BE PROVIDED.
4. GUARANTEE CERTIFICATE FOR THE EQUIPMENTS SHALL BE PROVIDED.
5. THREE SETS O & M MANUALS SHALL BE PROVIDED.