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Annexure - I

TECHNICAL SPECIFICATIONS

SJS - 34000 Series

CRANKSHAFT SPEED @650 RPM				POWER INPUT { CRANK SHAFT TEETH = 90; PINION TEETH = 28; RATIO= 1:3.21}			
MODEL	PLUNGER IN MM	LPM	GPM	<u>180HP</u>	<u>215HP</u>	<u>270HP</u>	<u>340HP</u>
				MAX.PRESSURE (Kg/cm²) @ POWER (IN HP)			
34026	26	86	23	815	990	1235	1540
34028	28	100	26	700	850	1060	1315
34030	30	114	30	610	740	925	1145
34032	32	130	34	535	650	815	1010
34036	36	165	43	425	515	645	800
34040	40	203	54	345	415	520	645
34045	45	258	68	270	330	410	510
34050	50	318	84	220	265	335	415
34055	55	385	102	180	220	275	340
34060	60	458	121	155	185	230	285
34065	65	537	142	130	160	200	245
34070	70	623	164	110	135	170	210
34075	75	715	188	100	120	150	185
34085	85	919	190	75	90	115	145
34095	95	1148	303	60	75	90	115

I. Power End:

Manufactured from High strength grey cast Iron Power End housing, containing Induction hardened Alloy steel Crank shaft, driven by means of built in helical gears & pinion drive which is supported by cylindrical Roller Bearing at both ends. Connecting rod machined from S. G. Iron with automotive type Split insert Big & Shell

II. Fluid End:

Ultrasonically tested forged S.S Pump head ensures safe operation at High pressure. Stainless-Steel Spring-loaded Valve & Valve seat for positive closing & Opening are machined, heat treated & grounded. Surface

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finishes for longer Seal & Plunger life. Teflon/PTFE made & easily replaceable Plunger seal in the Stainless-Steel Stuffing box.

III. Motor:

- 1. Type -TEFC, Squirrel Cage Induction
- 2. Rating-Suitable For 415 V +/- 10%, 3 Phase 50 Hz +
- 3. Mounting Foot Mounted
- 4. Temperature- Ambient Temp. 40 Deg. C, Class
- 5. Standard- As per IS: 325
- 6. Make KIRLOKAR/ ABB/ SIEMENS
- IV. **Electric Control Panel:** Non-F.L.P Type, Trolley mounted with standard makes fitting & accessories.
- V. Trolley: M.S Fabricated, Tow- able with swivel arrangement four wheels Trolley.
- VI. Safety: Spring-loaded High-Pressure relief valve
- VII. Filtration Unit: Basket Type 100 Micron
- VIII. Booster Feed Pump: Horizontal Centrifugal, Kirloskar Make
- IX. Pressure Gauge: 0 to 1000 BAR, Glycerin Filled 4" S.S Dial, 1/4" BSP Bottom Connection
- X. **Oil Pump:** Dowety Make Gear Type
- XI. Oil Cooler: Shell & Tube Type Oil Cooler
- XII. Coupling: H. P. Pump & Motor Coupling Type
- XIII. Pressure Regulating Valve: Spring Loaded, Stepless Type 0 to 1000

S.NO	PARTICULARS	DESCRIPTION
1	Manufacturer	Sterling Jetting Systems
2	Туре	Triplex Plunger Pump
3	Series	SJS- 34000
4	Pump Design Standard	API 674
7	Pump Speed (Strokes Per Minute)	450
9	Volumetric Efficiency at Rated Flow Capacity	-10%
17	Pump Efficiency at Rapid Flow Capacity at Design Pressure	90%
18	Motor Efficiency at Rated Pump Capacity at Design Pressure	94.8%

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19	Overall Efficiency at Pump with Motor (Pump $\eta \times Motor \eta$)	95%
22	Size Of Suction Connection	4 Inches
23	Size Of Discharge Connection	2 Inches
	Material Of Construction (Material Standard with Grade)	SS-304
24	Pump Body	Ci
25	Pump Head	Ss
26	Plunger	Ceramic
27	Plunger Surface Treatment	Heated
28	Cross Head & Liner	Ci & Ss
29	Connecting Rod	Ci And Ss
30	Connecting Rod Bearings	P.B
31	Crank Shaft	Carbon Steel
32	Crankshaft Bearing No.	Nv-2214-22316
33	Stuffing Box	Ss-304
34	Stuffing Box Packing	PTFE – Gland Type
35	Suction Manifold	Aluminum
36	Discharge Manifold	S. S
37	Pulsation Dampener	Fabricated
38	Suction Strainer	S. S
39	Bolts, Nuts and Fasteners	High Tensile
40	Base Plate/ Frame	Fabricated
41	Valves And Valve Seat	Heat Treated – S. S
42	Gear Box	In-Built Gear Box Pin Bush Type
43	Type Of Lubrication	Forced Lubrication
44	Oil Specification	150 Vg 320-25 Liter

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45	Oil Pump Capacity	35 Lpm
46	No Of Stages, Reduction Ratio	Single Stage, 1:3
47	Coupling Type	Pin Bush
48	Coupling Guard	Yes
49	Valves And Gauges	Dial Gauge Glycerin Field
50	Suction Strainer Mesh Size	400 Micron
51	Total Weight	4 T
52	Base Frame Plate Thickness	10 Mm
53	Foundation Bolt Size	M20

DO's

- 1. Before starting the H.P. Pump, check oil level in crank case & to be maintained & changed as per O & M manual.
- 2. Electrical connection should be proper.
- 3. Electrical motor rotation should be Clockwise from Fan side.
- 4. All high pressure hoses & adaptors connections should be proper tightened.
- 5. Water suction pressure should be 2-4 BAR.
- 6. Water Filter should be cleaned before starting the pump.
- 7. Safety Valve testing to be done once in 2 to 3 months.
- 8. Ensure continuous flow of filtered water with 40-80 Microns Filtration level.
- 9. Use proper & recommended Nozzle.
- 10. Stop H. P. Pump immediately if there is any leakage in discharge & abnormal sound during the operation.
- 11. H. P. Pump operation must be as per O & M manual.
- 12. All Hoses / Flexible Lances should be avoided in contact with sharp corners.
- 13. No leakage in Suction & Discharge is acceptable during operation.
- 14. All Pressure / Temperature switches to be checked periodically.

DONT's

- 1. Don't start the H. P. Pump in load condition.
- 2. Don't wear loose clothes while attending the pump.
- 3. Pressure Switches should not be bypassed.
- 4. Damaged H. P. Hoses should not be used & to be replaced.
- 5. Avoid over tightening of Pressure Regulator.

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