DATA SHEETS- MECHANICAL WORKS

SUBJECT: DATA SHEET OF SUBMERSIBLE CENTRIFUGAL NON CLOG PUMP

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO FILL BY BIDDER	
1.0	**LIQUID DATA**			
1.1	Liquid handled	Sewage	Sewage	Sewage
1.2	Specific gravity	1.02	1	1.02
1.3	Temperature	Amb. temp.- 45Deg. C	Amb. temp.-	Amb. temp.- 45Deg. C
1.4	Suc. Pre.@ rated capacity-m	Atmospheric	Atmospheric	Atmospheric
2.0	**PUMP DATA**			
2.1	Make	Please furnish		
2.2	Pump type	Submersible Centrifugal pumpset		
2.3	Pump Model	Please furnish		
2.4	Number of pumps	As per SOQ		
2.5	Type of duty	Continuous		
2.6	Design capacity-m³/hr.	As per SOQ		
2.7	Total Rated Head-m	As per SOQ		
2.8	Guaranteed Overall efficiency of Pump set-%	As per SOQ min. without -ve tolerance		
2.9	Motor input at rated duty-kw	Please furnish		
2.10	Rated Speed of pump-RPM	1000 Synch. max.		
2.11	Pump Efficiency at duty point-%	Please furnish		
2.12	Pump input at Duty Point-kW	Please furnish		
2.13	Max.BKW for Rated Impeller-kW	Please furnish		
2.14	Recommended motor rating- kW	Please furnish		
2.15	Full load speed of motor-RPM	Please furnish		
2.16	Min. Submergence Required-m	Please furnish		
2.17	Shut off head -m	Please furnish		
2.18	Min. permissible solid size-mm	100 mm (As per Requirement)		
2.19	Length of pair of cable offered with Pump (Power & Control) -m	As per SOQ	25	25
2.20	Location	Submerged		
3.0	**CONSTRUCTIONAL FEATURE**			
3.1	No. of stage	Single		
3.2	Casing	Volute type		
3.3	Impeller	Single suction Enclosed		
3.4	Impeller dia.-mm	Max. / Rated / Min.		
3.5	Shaft / Drive Transmission	Direct Uni-built		
3.6	Shaft sealing	Double Mechanical Seal		
3.7	-Type & size of Mech. Seal	Pl. furnish detail of faces		
	-Faces Pump side :	Pl. furnish detail of faces		
	Motor Side:	Pl. furnish detail of faces		
3.8	Mounting Orientation	Vertical		
3.9	Nozzle orientation & size in mm			
	Suction – mm	Bottom		

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO FILL BY BIDDER	
	Discharge - mm	Side		
3.10	Flange drilling	As per IS 1538, FF with off center bolt holes		
3.11	Direction of rotation	Pl. furnish		
3.12	Type of Starter	Star Delta/ATS/Soft Starter		
4.0	**MOTOR DATA**			
4.1	Motor Rating in KW	Pl. furnish		
4.2	Voltage / Phase / Frequency & % variation	Pl. furnish		
4.3	Combined Volt. & Freq. variation	Pl. furnish		
4.4	Amb. Temp. / Temp. Rise °C	Pl. furnish		
4.5	Insulation Class	Pl. furnish		
4.6	Duty	Continuous		
4.7	Full Load Speed-RPM	Pl. furnish		
4.8	Full load Torque(FLT)-Kgm	Pl. furnish		
4.9	Starting torque as % of FLT	Pl. furnish		
4.10	Full load current(FLC)-A	Pl. furnish		
4.11	Locked rotor current-A	Pl. furnish		
4.12	Starting Current as % of FLC	Pl. furnish		
4.13	Break down or POT - % of FLT	Pl. furnish		
4.14	Starting time at 80% V / 100% V (Sec.) with load coupled	Pl. furnish		
4.15	No load starting time	Pl. furnish		
4.16	Locked rotor withstand time Hot/cold (Sec)	Pl. furnish		
4.17	Overload capacity-%	Pl. furnish		
4.18	Permissible cold / hot starts-Nos	Pl. furnish		
4.19	Power factor @ 50% @ 75% @ 100% load	Pl. furnish		
4.20	Efficiency @ 50% @ 75% @ 100% load	Pl. furnish		
4.21	Guaranteed efficiency w/o tolerances	Pl. furnish		
4.22	Starting Power Factor	Pl. furnish		
4.23	Provision of Thermistors	Pl. furnish		
4.24	Bearing Type / Number,DE/ NDE	Pl. furnish		
4.25	Cable Type / Size Control & Signal Cable: Power Cable :	Pl. furnish		
4.26	Protection Class	IP-68		
5.0	**MATERIAL OF CONSTRUCTION**			

5.1	Pump Casing & Casing cover / Oil Chamber (forming part of casing)	CI;IS 210 GR FG 260 with 2% Ni		
5.2	Impeller , Impeller Nut (M)	CF 8 M		
5.3	Wear Plate / Wear Ring / suction Cover (M)	CI;IS 210 GR FG 260 with 2% Ni		
5.4	Shaft (M)	AISI 410		
5.5	Shaft Sleeve(M) (if Provided)	AISI 316		
5.6	Motor housing (M)	CI: IS 210 Gr FG 260		
5.7	Motor Jacket / Strainer	Not required		
5.8	Motor Rotor	Aluminum Die Cast		
5.9	Hardware in contact with liquid	SS 304		
5.10	Double Guide pipe	SS 304		
5.11	Painting	Pl. furnish detail		
5.12	Auto Coupling unit with del. Bend	CI epoxy painted		
5.13	Auto Control Panel	Not required		
6.0	**ACCESSORIES & SERVICES REQUIRED**			
6.1	Auto Coupling unit	YES		
6.2	Strainer	NO		
6.3	Guide pipe with support	YES		
6.4	SS304 Lifting Chain	YES		
6.5	Set of foundation bolts & Nuts	YES		
6.6	Control Panel	NO		
6.7	Non standard / special maintenance tools	YES		
6.8	Two years normal working Spare parts list	YES		
7.0	**WEIGHT**			
7.1	Weight of pump set-kg	Pl. furnish		
7.2	Reco. crane capacity-Ton	Pl. furnish		
8.0	**DRAWINGS**			
8.1	ISO Efficiency Performance curve	Pl furnish		
8.2	GAD drg. of Pump set	Pl furnish		
8.3	C/S drg. of pump set with part list	Pl furnish		
8.4	Catalogue of products	Pl furnish		
8.5	QAP of products	Pl furnish		
9.0	**TESTING**			
9.1	Hydrostatic test	Certificate required for Review		
9.2	Performance test	Witness		
9.3	Static and dynamic balancing test	Certificate required for Review		
9.4	Strip test	Certificate required for Review		
9.5	Visual inspection check	Witness		

Note: 01. Manufacturer / supplier shall submit separate data sheet for each duty.
02. For components (marked-M) material certificates shall be furnished
03.Bidder shall refer electrical specifications for motor requirement and shall offer accordingly.

SUBJECT: DATA SHEET OF PORTABLE SUBMERSIBLE CENTRIFUGAL NON CLOG PUMP

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO FILL BY BIDDER
1.0	**LIQUID DATA**		**Dewatering Pump**
1.1	Liquid handled	Sewage	Sewage
1.2	Specific gravity	1.02	1.02
1.3	Temperature	Amb. temp.- 45Deg. C	Amb. temp.- 45Deg. C
1.4	Suc. Pre.@ rated capacity-m	Atmospheric	Atmospheric
2.0	**PUMP DATA**		
2.1	Make	Please furnish	
2.2	Pump type	Submersible Centrifugal with Wet type motor	
2.3	Pump Model	Please furnish	
2.4	Number of pumps	As per SOQ	
2.5	Type of duty	Continuous	
2.6	Design capacity-m³/hr.	As per SOQ	
2.7	Total Rated Head-m	As per SOQ	
2.8	Guaranteed Overall efficiency of Pump set-%	As per SOQ min. without -ve tolerance	
2.9	Motor input at rated duty-kw	Please furnish	
2.10	Rated Speed of pump-RPM	1000 Synch. max.	
2.11	Pump Efficiency at duty point-%	Please furnish	
2.12	Pump input at Duty Point-kW	Please furnish	
2.13	Max.BKW for Rated Impeller-kW	Please furnish	
2.14	Recommended motor rating- kW	Please furnish	
2.15	Full load speed of motor-RPM	Please furnish	
2.16	Min. Submergence Required-m	Please furnish	
2.17	Shut off head -m	Please furnish	
2.18	Min. permissible solid size-mm	40	
2.19	Length of pair of cable offered with Pump (Power & Control) -m	As per SOQ	20
2.20	Location	Submerged	
3.0	**CONSTRUCTIONAL FEATURE**		
3.1	No. of stage	Single	
3.2	Casing	Volute type	
3.3	Impeller	Single suction Enclosed	
3.4	Impeller dia.-mm	Max. / Rated / Min.	
3.5	Shaft / Drive Transmission	Direct Uni-built	
3.6	Shaft sealing	Double Mechanical Seal	
3.7	-Type & size of Mech. Seal	Pl. furnish detail of faces	
	-Faces Pump side :	Pl. furnish detail of faces	
	Motor Side:	Pl. furnish detail of faces	
3.8	Mounting Orientation	Vertical	
3.9	Nozzle orientation & size in mm		
	Suction – mm	Bottom	
	Discharge - mm	Side	
3.10	Flange drilling	As per IS 1538, FF with off center bolt holes	

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO FILL BY BIDDER
3.11	Direction of rotation	Pl. furnish	
3.12	Type of Starter	Star Delta/ATS/Soft starter	
4.0	**MOTOR DATA**		
4.1	Motor Rating in KW	Pl. furnish	
4.2	Voltage / Phase / Frequency & % variation	Pl. furnish	
4.3	Combined Volt. & Freq. variation	Pl. furnish	
4.4	Amb. Temp. / Temp. Rise °C	Pl. furnish	
4.5	Insulation Class	Pl. furnish	
4.6	Duty	Continuous	
4.7	Full Load Speed-RPM	Pl. furnish	
4.8	Full load Torque(FLT)-Kgm	Pl. furnish	
4.9	Starting torque as % of FLT	Pl. furnish	
4.10	Full load current(FLC)-A	Pl. furnish	
4.11	Locked rotor current-A	Pl. furnish	
4.12	Starting Current as % of FLC	Pl. furnish	
4.13	Break down or POT - % of FLT	Pl. furnish	
4.14	Starting time at 80% V / 100% V (Sec.) with load coupled	Pl. furnish	
4.15	No load starting time	Pl. furnish	
4.16	Locked rotor withstand time Hot/cold (Sec)	Pl. furnish	
4.17	Overload capacity-%	Pl. furnish	
4.18	Permissible cold / hot starts-Nos	Pl. furnish	
4.19	Power factor @ 50% @ 75% @ 100% load	Pl. furnish	
4.20	Efficiency @ 50% @ 75% @ 100% load	Pl. furnish	
4.21	Guaranteed efficiency w/o tolerances	Pl. furnish	
4.22	Starting Power Factor	Pl. furnish	
4.23	Provision of Thermistors	Pl. furnish	
4.24	Bearing Type / Number, DE / NDE	Pl. furnish	
4.25	Cable Type / Size Control & Signal Cable: Power Cable :	Pl. furnish	
4.26	Protection Class	IP-68	
5.0	**MATERIAL OF CONSTRUCTION**		
5.1	Pump Casing & Casing cover	CI;IS 210 GR FG 260	
5.2	Impeller / Impeller Nut (M)	CF 8 M	
5.3	Wear Plate / Wear Ring / suction Cover (M)	CI;IS 210 GR FG 260	

5.4	Shaft (M)	AISI 410	
5.5	Shaft Sleeve(M) (if Provided)	AISI 316	
5.6	Motor housing & Oil chamber (M)	CI: IS 210 Gr FG 260	
5.7	Motor Jacket / Strainer	Not required	
5.8	Motor Rotor	Aluminum Die Cast	
5.9	Hardware in contact with liquid	SS 304	
5.10	Pump Mounting Stool	CI/SS	
5.11	Painting	Pl. furnish detail	
5.12	Delivery Bend	CI epoxy painted	
5.13	Auto Control Panel	Required	
6.0	**ACCESSORIES & SERVICES REQUIRED**		
6.1	Pump mounting Stool	Yes	
6.2	Strainer	NO	
6.3	SS304 Lifting Chain	YES	
6.4	PVC hose Pipe with Connector	Yes as per BOQ	
6.5	Control Panel	Yes	
6.6	Non standard / special maintenance tools	YES	
6.7	Two years normal working Spare parts list	YES	
7.0	**WEIGHT**		
7.1	Weight of pump set-kg	Pl. furnish	
7.2	Reco. crane capacity-Ton	Pl. furnish	
8.0	**DRAWINGS**		
8.1	ISO Performance curve	Pl furnish	
8.2	GAD drg. of Pump set	Pl furnish	
8.3	C/S drg. of pumpset with part list	Pl furnish	
8.4	Catalogue of products	Pl furnish	
8.5	QAP of products	Pl furnish	
9.0	**TESTING**		
9.1	Hydrostatic test	Certificate required for Review	
9.2	Performance test	Witness	
9.3	Static and dynamic balancing test	Certificate required for Review	
9.4	Strip test	Certificate required for Review	
9.5	Visual inspection check	Witness	

Note: 01. Manufacturer / supplier shall submit separate data sheet for each duty.
02. For components (marked-M) material certificates shall be furnished
03.Bidder shall refer electrical specifications for motor requirement and shall offer accordingly.

SUBJECT: DATA SHEET OF HORIZONTAL NON CLOG CF PUMP

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO FILL BY BIDDER	
1.0	**LIQUID DATA**			
1.1	Liquid handled	Sewage	Sewage	
1.2	Specific gravity	1.02	1.02	
1.3	Temperature	Ambient temp-50°C	Ambient temp-50°C	
1.4	Suc. Pre.@ rated capacity-m	Flooded	Flooded	
2.0	**PUMP DATA**		**Item-1**	**Item-2**
2.1	Make	Pl furnish		
2.2	Pump type	Horizontal Non Clog CF End Suction-BPO		
2.3	Pump Model	Pl furnish		
2.4	Number of pumps	-		
2.5	Type of duty	Continuous		
2.6	Design capacity in m^3/hr.	Pl furnish		
2.7	Total Rated Head- mlc	Pl furnish		
2.8	Guaranteed Pump efficiency at rated capacity-%	w/o -ve tolerance		
2.9	Guaranteed Overall efficiency of Pumpset at rated capacity-%	w/o -ve tolerance		
2.10	Pump input at rated duty-KW	Pl furnish		
2.11	Rated Speed of pump-RPM	Pl furnish FLS		
2.12	Max. BKW @ Rated Impeller.	Pl furnish		
2.13	Reco. Drive motor rating-KW	Pl furnish		
2.14	FLS of motor-RPM	Pl furnish		
2.15	NPSH (R)-m	Pl furnish		
2.16	Shut off head-m	Pl furnish		
2.17	Min. Permi. Solid Size-mm	50 mm-100mm (As per requirement)		
2.18	Location	Indoor		
3.0	**CONSTRUCTIONAL FEATURE**			
3.1	No. of stage	Single		
3.2	Casing	Volute type		
3.3	Impeller	Non Clog, Single suction Enclosed		
3.4	Impeller dia.-mm	Max. / Rated / Min.		
3.5	Shaft / Drive Transmission	Direct Coupled		
3.6	Shaft sealing	Gland Packed	—	
3.7	Gland packing Type & Size	Pl. furnish		
3.8	Mounting	Vertical		
3.9	Nozzle orientation & size-mm			
	Suction	Side		
	Discharge	Top/Side		
3.10	Flange drilling	IS 1538, FF with off center bolt holes		

3.11	Direction of rotation	CW - from driving end		
3.12	Type of Starter	Star-Delta/ATS/Soft stater		
3.13	Pump Lubrication	oil		
4.0	**MATERIAL OF CONSTRUCTION**			
4.1	Pump Casing/Casing Cover/ Stuffing Box Housing	CI ; IS 210 gr FG 260 with 2 Ni.		
4.2	Impeller	CF 8M		
4.3	Shaft	SS AISI 410		
4.4	Shaft Sleeve	AISI 410		
4.5	Casi. wear ring/ Wear Plate	SS316/CF8M		
4.6	Lantern Ring	CI/WM/Brass		
4.7	Shaft Sealing	Gland Packed		
4.9	Gland Bolts, Washers & Nuts	SS 316		
4.10	Liquid deflector	Natural Rubber		
5.11	Split Gland	CI ; IS 210 Gr FG 260		
5.12	Base plate	CI epoxy coated		
5.13	Painting	Pl furnish		

Note: 01. Manufacturer / supplier shall submit separate data sheet for each duty.
02. For components (marked-M) material certificates shall be furnished
03.Bidder shall refer electrical specifications for motor requirement and shall offer accordingly.

SUBJECT: DATA SHEET OF VERTICAL NON CLOG CF PUMP

SR. NO.	**PARTICULAR**	**DESCRIPTION**	**DATA TO FILL BY BIDDER**	
1.0	**LIQUID DATA**			
1.1	Liquid handled	Sewage	Sewage	
1.2	Specific gravity	1.02	1.02	
1.3	Temperature	Ambient temp-50°C	Ambient temp-50°C	
1.4	Suc. Pre.@ rated capacity-m	Flooded	Flooded	
2.0	**PUMP DATA**		**Item-1**	**Item-2**
2.1	Make	Pl furnish		
2.2	Pump type	Vertital Non Clog CF End Suction-BPO		
2.3	Pump Model	Pl furnish		
2.4	Number of pumps	-		
2.5	Type of duty	Continuous		
2.6	Design capacity in m³/hr.	Pl furnish		
2.7	Total Rated Head- mlc	Pl furnish	—	
2.8	Guaranteed Pump efficiency at rated capacity-%	w/o -ve tolerance		
2.9	Guaranteed Overall efficiency of Pumpset at rated capacity-%	w/o -ve tolerance		
2.10	Pump input at rated duty-KW	Pl furnish		
2.11	Rated Speed of pump-RPM	Pl furnish FLS		
2.12	Max. BKW @ Rated Impeller.	Pl furnish		
2.13	Reco. Drive motor rating-KW	Pl furnish		

2.14	FLS of motor-RPM	Pl furnish		
2.15	NPSH (R)-m	Pl furnish		
2.16	Shut off head-m	Pl furnish		
2.17	Min. Permi. Solid Size-mm	50-100 mm (As per requirement)		
2.18	Location	Indoor		
3.0	**CONSTRUCTIONAL FEATURE**			
3.1	No. of stage	Single		
3.2	Casing	Volute type		
3.3	Impeller	Non Clog, Single suction Enclosed/ Semi Open		
3.4	Impeller dia.-mm	Max. / Rated / Min.		
3.5	Shaft / Drive Transmission	Direct Coupled		
3.6	Shaft sealing	Gland Packed		
3.7	Gland packing Type & Size	Pl. furnish		
3.8	Mounting	Vertical		
3.9	Nozzle orientation & size-mm			
	Suction	Side		
	Discharge	Top/Side		
3.10	Flange drilling	IS 1538, FF with off center bolt holes		
3.11	Direction of rotation	CW - from driving end		
3.12	Type of Starter	Star-Delta/ATS/Soft starter		
4.0	**MATERIAL OF CONSTRUCTION**			
4.1	Pump Casing/Casing Cover/ Stuffing Box Housing	CI ; IS 210 gr FG 260 with 2 Ni.		
4.2	Impeller	CF 8M		
4.3	Shaft	SS AISI 410		
4.4	Shaft Sleeve	AISI 410		
4.5	Casi. wear ring/ Wear Plate	SS316/CF8M		
4.6	Lantern Ring	CI/WM/Brass		
4.7	Shaft Sealing	Gland Packed		
4.9	Gland Bolts, Washers & Nuts	SS 316		
4.10	Liquid deflector	Natural Rubber		
5.11	Split Gland	CI ; IS 210 Gr FG 260		
5.12	Base plate	CI epoxy coated		
5.13	Painting	Pl furnish		

Note: 01. Manufacturer / supplier shall submit separate data sheet for each duty.
02. For components (marked-M) material certificates shall be furnished
03.Bidder shall refer electrical specifications for motor requirement and shall offer accordingly.

SUBJECT : DATA SHEET FOR DUCTILE IRON SLUICE VALVE

SR. NO.	PARTICULARS		DESCRIPTION	DATA TO FILL BY BIDDER
1.0	Make		Pl. furnish detail	
2.0	Manufacturing Standard		IS : 14846 – 2000 or latest rev.	
3.0	Size and quantity		Pl furnish detail	
4.0	Fluid / Specific gravity		Sewage / 1.02	
5.0	Pressure Rating		PN : 1.6	
6.0	Stem		**Non Rising Spindle**	
7.0	Ends		Flanged, flat faced as per IS-1538 having off center bolt holes	
8.0	Bonnet		Bolted	
9.0	Disc.		Solid wedge	
10.0	Operation		**Hand wheel operated**	
11.0	Seat	Body	Renewable	
		Disc	Renewable	
12.0	Direction of Closing		Clockwise	
13.0	Repacking /Back Seat Bush Arrangement		Required (above 300 mm size)	
14.0	Channel & Shoe Arrangement		Required (600mm & above size)	
15.0	Gear Box arrangement		Required for manually operated valves (350 mm & above size)	
16.0	By-pass arrangement		(above 500 mm size)	Not Required
17.0	Position Indicator		Required (above 300 mm size)	
18.0	Drain Plug		Required (above 300 mm size)	
	Material Of Construction			
19.0	Body / bonnet		DI, IS 1865-1974, GR 400/12 (M)	
20.0	Disc		DI, IS 1865-1974, GR 400/12(M)	
21.0	Stem		S.S. AISI – 304 (M)	
22.0	Body seat		S.S. AISI – 304 (M)	
23.0	Disc seat		S.S. BS 970 Gr 304 (M)	
24.0	Stuffing box		DI, IS 1865-1974, GR 400/12	
25.0	Stuffing Box Bush		Bronze IS 318 GR LTB2	
26.0	Gland		DI, IS 1865-1974, GR 400/12	
27.0	Drain Plug		Gun Metal / SS 304	
28.0	Gland Packing		Greasy Jute Packing	
29.0	Bolts, studs & nuts		Carbon Steel IS 1367 Class 4.6/4	
30.0	Hand wheel /Cap		DI, IS 1865-1974, GR 400/12	
31.0	Shell test		24 Kg / Cm²	
32.0	Seat test		16 Kg / Cm²	

NOTE:01. Manufacturer / supplier shall submit separate data sheet for each duty.
02. For components (marked-M) material certificates shall be furnished

SUBJECT: DATA SHEET FOR SWING CHECK DOOR NON RETURN VALVE

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO BE FILLED BY VENDOR
1.0	**CONSTRUCTIONAL FEATURES**		
1.1	Make	Pl. furnish detail	
1.2	Mfg. Standard	IS 5312 PART I	
1.3	Pressure Rating	PN 1.6	
1.4	Size & Quantity	Pl. furnish detail	
1.5	Fluid	Sewage	
1.6	Sp Gravity	1.02	
1.7	Type	Non slam, Single swing type	
1.8	Ends	Flanged. Flat faced and confirming to IS 1538 part IV & VI having off center bolt holes	
1.9	Seat	Body :Renewable Disc :Renewable	
2.0	**MATERIAL OF CONSTRUCTION**		
2.1	Body / Cover	DI, IS 1865-1974, GR 400/12	
2.2	Door	DI, IS 1865-1974, GR 400/12 (M)	
2.3	Body & Disc Seat rings	S.S AISI 304 (M)	
2.4	Hinge Pin	S.S BS 970 Gr 431 S29 (M)	
2.5	Bolts, Studs & Nuts	SS 304	
3.0	**ACCESSORIES**		
3.1	By-Pass Arrangement	Not Required	
3.2	Drain Plug	Required	
3.3	Support foot	Not Required	
4.0	**DRAWINGS**		
4.1	General outline dimensional drg.	Pl. furnish detail	
4.2	C.S. drawing with parts	Pl. furnish detail	
4.3	QA plan	Pl. furnish detail	
5.0	**TESTING**		
5.1	Shell test	To be witnessed	24 Kg / Cm²
5.2	Seat test	To be witnessed	16 Kg / Cm²

NOTE: 01. Manufacturer / supplier shall submit separate data sheet for each duty.
02. For components (marked-M) material certificates shall be furnished

SUBJECT: TECHNICAL DATA SHEET FOR METALLIC EXPANSION BELLOWS

SR. NO.	PARTICULARS	DESCRIPTION	DATA TO BE FILLED BY BIDDER
1.0	**LIQUID DATA**		
1.1	Fluid / Specific gravity	Sewage / 1.02	
1.2	Temperature	ambient	
2.0	**EXPANSION BELLOWS DATA**		
2.1	Make	Pl. furnish detail	
2.2	Manufacturing Standard	EJMA / ASME	
2.3	Size range and quantity	As per SOQ	
2.4	Overall length in mm	As per SOQ	
2.5	Pressure Rating	PN : 1.6	
2.6	Axial expansion in mm	5	
2.7	Axial compression in mm	15	
2.8	Mode of installation	Horizontal	
2.9	Ends	Flanged, flat faced as per IS-1538 having off center bolt holes	
2.10	No of Convolution	Pl. furnish	
2.11	Thickness of Weld End	Pl. furnish	
2.12	Thickness of internal sleeve	Pl. furnish	
3.0	**MATERIAL OF CONSTRUCTION**		
3.1	Bellows (M)	SS 304	
3.2	Internal Sleeves (M)	SS 304	
3.3	Flanges (M)	DI/MS	
3.4	Lugs	DI/MS	
3.5	Rods	IS 1367 VI 1994 Cl 4.6	
3.6	Hardware	C.S IS 1367	
4.0	**TESTING**		
4.1	Hydrostatic Test pressure	24 kg / sq.cm	
4.2	Expansion/Compression test	Required	

Note:

1. M- Denotes material test required
2. Separate data sheet shall be filled in for each Pumping station.