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结构特征与工作原理 STRUCTURAL FEATURE AND OPERA

QSZ 型潜水渣浆泵为水泵与电机同轴一体，工作时通过电机轴带动水泵叶轮旋转，将能量传递给浆体介质，使之产生一定的流速，带动固体物流动，实现浆体的输送。

其主要特点如下：

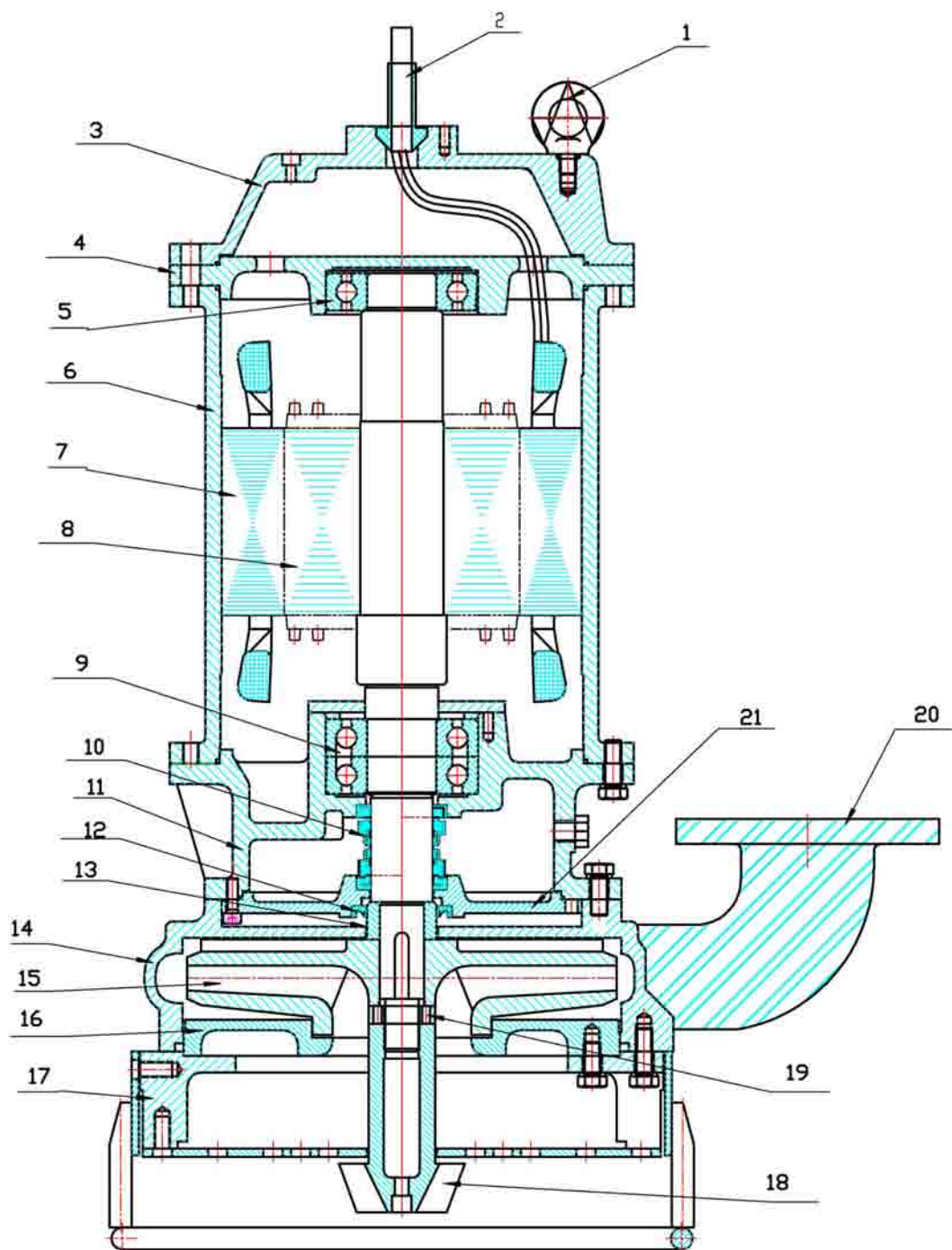
- 1、整机为干式电机下泵式结构。电机采用机械密封保护，能有效地防止高压水和杂质进入电机内腔。
- 2、除主叶轮外，还设有搅拌叶轮，能将沉淀于水底的渣搅拌成湍流后抽取出来。
- 3、叶轮、搅拌叶轮等主要过流部件采用高耐磨材质制造，耐磨损、耐腐蚀、无堵塞、排污能力强，能有效地通过较大的固体颗粒。
- 4、不受吸程限制，吸渣效率高，清淤更彻底。
- 5、无需配备辅助真空泵，投资更低廉。
- 6、无需配备辅助搅拌或喷击装置，操作更简便。
- 7、电机潜入水下，无需建设复杂的地面保护和固定装置，管理更便易。
- 8、搅拌叶轮直接接触沉积面，通过下潜深度控制浓度，因而浓度控制更自如。
- 9、设备直接潜入水下工作，无噪音及震动，现场更整洁

QSZ type submersible slurry pump for the pump and motor coaxial , through the motor shaft driven pump impeller rotation when operation, the energy transfer to the slurry medium, thus producing a certain velocity, led solids flow to achieve slurry delivery.

Main features are as follows:

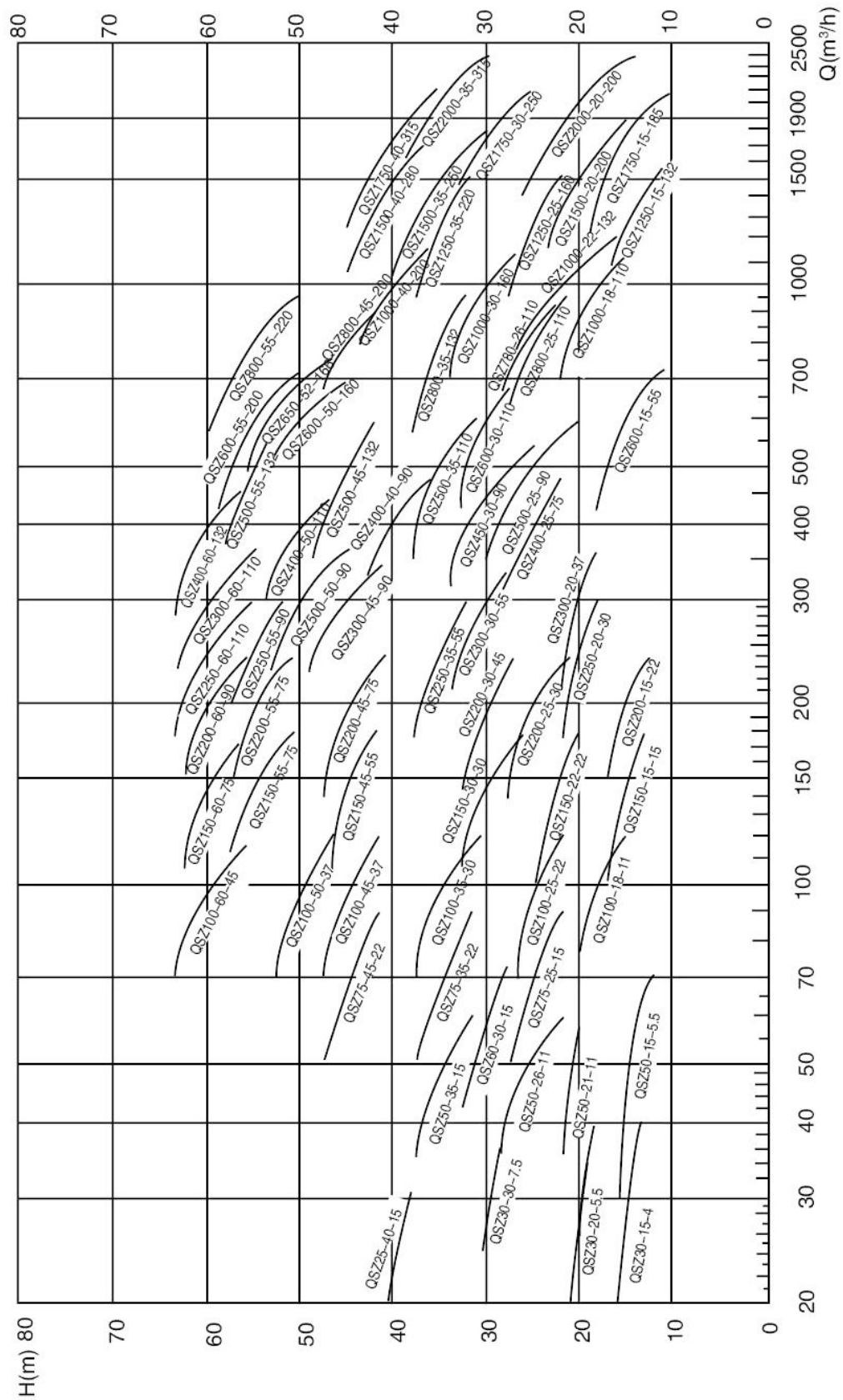
1. Machine is dry type motor pump structure. Motor adopt mechanical seal protection and can be effectively prevent high-pressure water and contaminants into the motor cavity.
2. In addition to the main impeller, also equipped with mixing impeller and can be extracted residue stirred into a turbulent precipitate at the bottom of the post .
3. Impeller, mixing impeller and other major wet parts using high wear-resistant material manufacturing, wear-resistant , corrosion resistance, non-clogging blowdown ability , can be through larger solid particles effectively .
4. No limitation by suction head , high efficiency suction slag , more thoroughly cleaning .
5. Without auxiliary vacuum pumps, investment cheaper.
6. No equipped with auxiliary mixing or spraying devices , operation more convenient .
7. Motor submerged, without building complex ground protection and fixtures, management more convenient and easy.
8. Mixing impeller direct contact deposition surface, control concentration through dive depth , therefore concentration control more comfortable.
9. Device directly submerged to work, no noise and vibration, scene cleaner.

结构图 STRUCTURE CHART



1、吊环 Ring	2、电缆 Electric cable	3、出线盖 Cable outlet cover	4、电机上盖 Up cover of motor
5、轴承 Bearing	6、电机壳 Motor casing	7、定子 Stator	8、转子轴 Rotor shaft
9、双列轴承 Double row bearings	10、机械密封 Mechanical seal	11、油室 Oil chamber	
12、骨架密封 Skeleton Seal	13、耐磨套 Wear ring	14、泵壳 Casing	
15、叶轮 Impeller	16、吸水板 Suction plate	17、底座 Base plate	18、搅拌器 Agitator
19、叶轮螺母 Impeller nut	20、出水法兰 Outlet flange	21、油室盖 Oil chamber cover	

性能型谱 PERFORMANCE CHART



性能参数表 PERFORMANCE DATA

序号 No.	型号 Model	出水口径 Outlet Dia mm	流量 Flow (m³/h)	扬程 Head (m)	功率 Power (KW)	转速 Speed (r/min)	效率 Eff. η	间断通过最大粒度 Max Particle size (mm)
1	QSZ30-15-4	80	16 30 40	16 15 14	4	1460	65	13
2	QSZ30-20-5.5	80	20 30 40	21 20 19	5.5	1460	65	10
3	QSZ50-15-5.5	100	30 50 70	16 15 12	5.5	1460	64	15
4	QSZ30-30-7.5	80	24 30 36	31 30 29	7.5	1460	63	13
5	QSZ50-21-11	80	35 50 60	22 21 20	11	1460	68	21
6	QSZ50-26-11	80	35 50 60	29 26 24	11	1460	68	13
7	QSZ100-18-11	100	70 100 120	20 18 15	11	1460	65	21
8	QSZ25-40-15	80	18 25 30	41 40 39	15	1460	65	13
9	QSZ50-35-15	80	35 50 60	38 35 32	15	1460	67	13
10	QSZ60-30-15	100	42 60 72	33 30 27	15	1460	70	13
11	QSZ7-25-15	100	52 75 90	28 25 22	15	1460	71	13
12	QSZ150-15-15	100	105 150 180	17 15 13	15	1460	76	21
13	QSZ75-35-22	100	52 75 90	38 35 32	22	1460	68	13
14	QSZ75-45-22	100	52 75 90	48 45 42	22	1460	68	13
15	QSZ100-25-22	100	70 100 120	27 25 22	22	1460	65	14

性能参数表 PERFORMANCE DATA

序号 No.	型号 Model	出水口径 Outlet Dia mm	流量 Flow (m ³ /h)	扬程 Head (m)	功率 Power (KW)	转速 Speed (r/min)	效率 Eff. η	间断通过最大粒度 Max Particle size (mm)
16	QSZ150-22-22	150	105 150 180	25 22 20	22	1460	70	32
17	QSZ200-15-22	150	140 200 240	17 15 13.5	22	1460	70	45
18	QSZ100-35-30	150	70 100 120	38 35 31	30	1460	70	21
19	QSZ140-30-30	100	105 140 180	33 30 26	30	1460	71	21
20	QSZ200-25-30	150	140 200 240	28 25 21	30	1460	71	25
21	QSZ250-20-30	150	175 250 300	23 20 18	30	1460	70	25
22	QSZ100-45-37	150	70 10 120	48 45 42	37	1460	73	21
23	QSZ100-50-37	150	70 100 120	53 50 47	37	1460	73	13
24	QSZ300-20-37	150	240 300 360	22 20 17	37	1460	68	28
25	QSZ100-60-45	100	70 100 120	64 60 55	45	1460	63	13
26	QSZ200-30-45	150	140 200 240	33 30 27	45	1460	63	25
27	QSZ150-45-55	150	105 150 180	47 45 42	55	1460	70	21
28	QSZ250-35-55	150	175 250 300	38 35 33	55	1460	69	36
29	QSZ300-30-55	150	210 300 360	34 30 26	55	1460	68	36
30	QSZ600-15-55	250	420 600 720	18 15 11	55	1460	72	32

性能参数表 PERFORMANCE DATA

序号 No.	型号 Model	出水口径 Outlet Dia mm	流量 Flow (m ³ /h)	扬程 Head (m)	功率 Power (KW)	转速 Speed (r/min)	效率 Eff. η	间断通过最大粒度 Max Particle size (mm)
31	QSZ150-55-75	150	105 150 180	58 55 51	75	1460	68	15
32	QSZ150-60-75	150	105 150 180	63 60 56	75	1460	68	15
33	QSZ200-45-75	150	140 200 240	48 45 41	75	1460	62	18
34	QSZ200-55-75	150	140 200 240	58 55 51	75	1460	70	18
35	QSZ350-35-75	200	245 350 420	78 75 71	75	1460	70	29
36	QSZ400-25-75	200	280 400 480	29 25 23	75	1460	72	29
37	QSZ200-60-90	150	140 200 240	63 60 57	90	1460	70	14
38	QSZ250-55-90	150	170 250 300	58 55 52	90	1460	70	14
39	QSZ300-45-90	150	210 300 360	50 45 39	90	1460	72	25
40	QSZ300-50-90	150	210 300 360	54 50 45	90	1460	72	25
41	QSZ400-40-90	200	280 400 480	44 40 36	90	1460	73	25
42	QSZ500-25-90	200	350 500 600	30 25 20	90	1460	74	25
43	QSZ450-30-90	200	315 450 540	34 30 25	90	1460	74	25
44	QSZ250-60-110	150	175 250 300	64 60 55	110	1460	74	18
45	QSZ300-60-110	150	210 300 360	64 60 56	110	1460	75	18

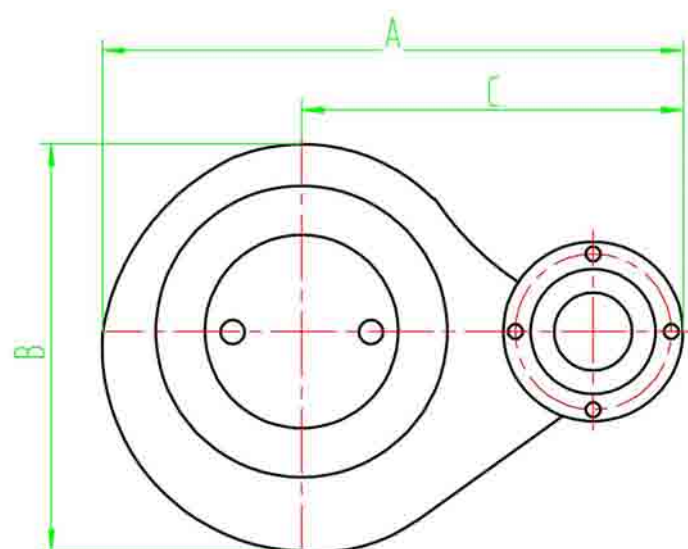
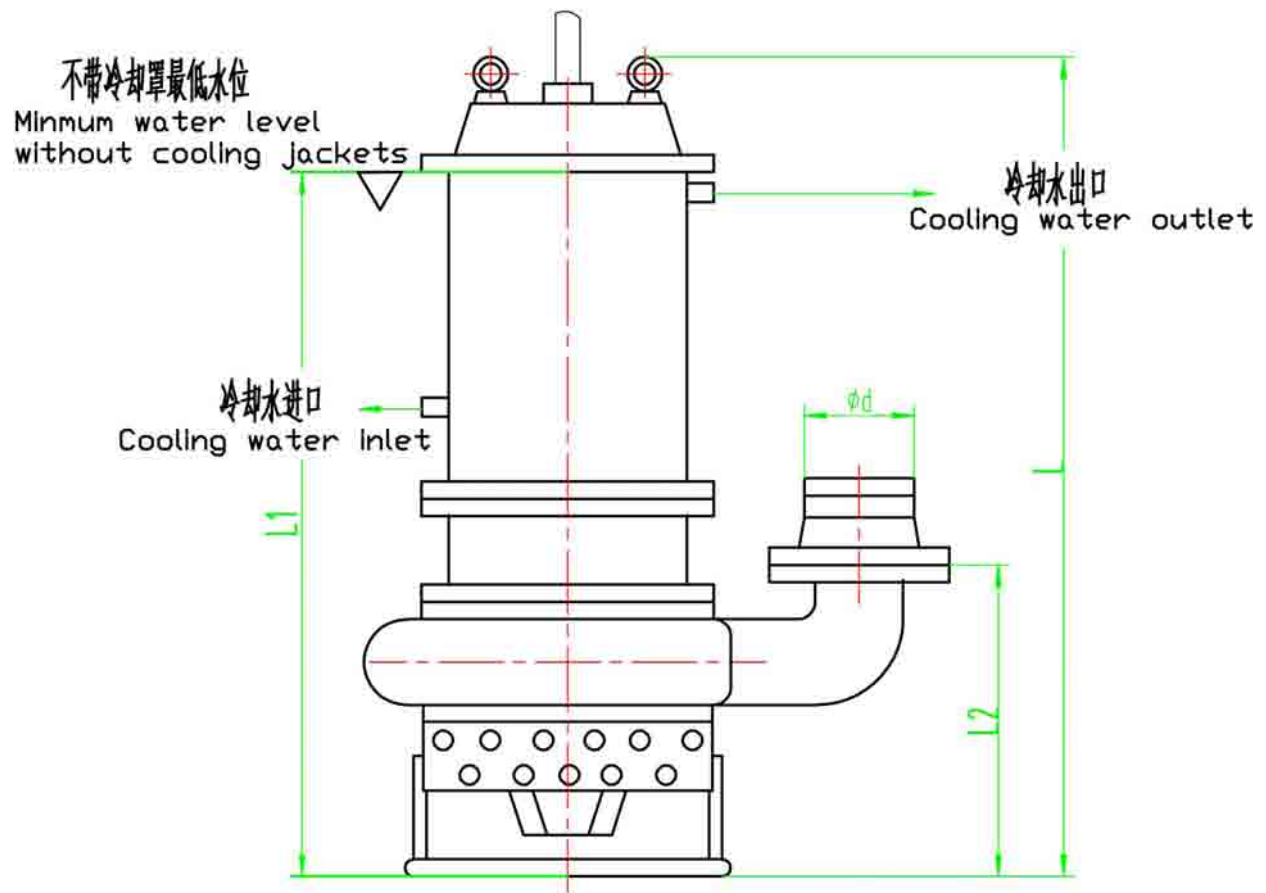
性能参数表 PERFORMANCE DATA

序号 No.	型号 Model	出水口径 Outlet Dia mm	流量 Flow (m ³ /h)	扬程 Head (m)	功率 Power (KW)	转速 Speed (r/min)	效率 Eff. η	间断通过最大粒度 Max Particle size (mm)
46	QSZ400-50-110	200	280 400 480	54 50 45	110	1460	76	28
47	QSZ500-35-110	200	350 500 600	38 35 31	110	1460	71	32
48	QSZ600-30-110	250	420 600 720	33 30 26	110	1460	74	35
49	QSZ800-25-110	300	560 800 960	28 25 21	110	1460	76	50
50	QSZ100-18-110	300	700 1000 1200	22 18 13	110	1460	78	50
51	QSZ780-26-110	300	545 780 935	29 26 22	110	1460	78	50
52	QSZ400-60-132	200	280 400 480	64 60 55	132	1460	78	28
53	QSZ500-45-132	200	350 500 600	49 45 42	132	1460	77	28
54	QSZ500-55-132	200	350 500 600	59 55 52	132	1460	70	28
55	QSZ800-35-132	300	560 800 960	38 35 32	132	1460	70	42
56	QSZ1000-22-132	300	700 1000 1200	27 22 17	132	1460	71	50
57	QSZ1250-15-132	300	875 1250 1500	18 15 12	132	1460	70	56
58	QSZ600-50-160	200	420 600 720	56 50 43	160	1460	75	28
59	QSZ650-52-160	200	455 650 780	56 52 44	160	1460	75	28
60	QSZ1250-25-160	350	875 1250 1500	28 25 22	160	1460	70	56

性能参数表 PERFORMANCE DATA

序号 No.	型号 Model	出水口径 Outlet Dia mm	流量 Flow (m ³ /h)	扬程 Head (m)	功率 Power (KW)	转速 Speed (r/min)	效率 Eff. η	间断通过最大粒度 Max Particle size (mm)
61	QSZ1000-30-160	300	700 1000 1200	34 30 25	160	1460	70	53
62	QSZ1750-15-185	350	1225 1750 2100	19 15 10	185	1460	70	56
63	QSZ600-55-200	250	420 600 720	59 55 50	200	1460	72	28
64	QSZ800-45-200	300	560 800 60	49 45 40	200	1460	76	42
65	QSZ1000-40-200	300	700 1000 1200	45 40 35	200	1460	70	42
66	QSZ1500-20-200	350	1050 1500 1800	24 20 15	200	1460	71	56
67	QSZ2000-20-200	400	1400 2000 2400	25 20 14	200	1460	72	56
68	QSZ800-55-220	300	560 800 960	60 55 50	220	1460	76	38
69	QSZ1250-35-200	350	875 1250 1500	39 35 30	220	1460	70	45
70	QSZ1000-50-250	300	700 1000 1200	55 50 45	250	1460	68	45
71	QAZ1500-35-250	350	1050 1500 1800	40 35 30	250	1460	72	50
72	QSZ1750-30-250	350	1225 1750 2100	34 30 25	250	1460	70	55
73	QSZ1500-40-280	350	1050 1500 1800	45 40 35	280	1460	70	50
74	QSZ1750-40-315	350	1225 1750 2100	45 40 35	315	1460	70	55
75	QSZ2000-35-315	400	1400 2000 2400	40 35 30	315	1460	72	60

外形及安装尺寸图 APPEARANCE AND INSTALLATION DIMENSIONS



安装尺寸表 INSTALLATION SIZE TABLE

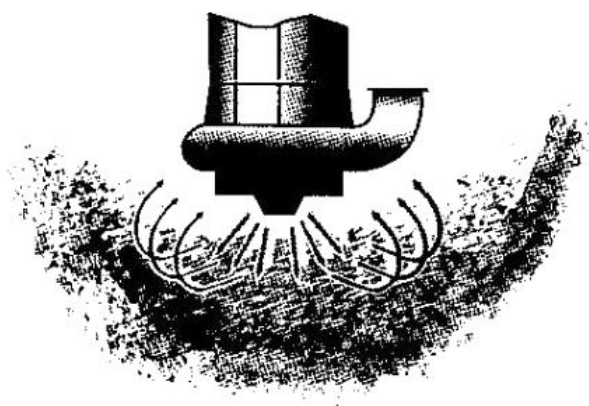
序号 No.	型号 Type	L mm	L1 mm	L2 mm	A mm	B mm	C mm	胶管联接 Rubber tube connection
								Φd (mm)
1	QSZ30-15-4	770	646	290	480	295	330	80
2	QSZ30-20-5.5	760	630	295	530	380	345	80
3	QSZ50-15-5.5	760	630	310	590	380	405	100
4	QSZ30-30-7.5	842	700	296	605	390	396	80
5	QSZ50-21-11	913	738	300	606	406	405	100
6	QSZ50-26-11	889	720	296	605	390	396	80
7	QSZ100-18-11	913	738	300	606	406	405	100
8	QSZ25-40-15	950	774	290	673	440	435	80
9	QSZ50-35-15	950	774	290	632	385	422	100
10	QSZ60-30-15	950	774	190	632	385	422	100
11	QSZ75-25-15	950	774	300	606	406	405	100
12	QSZ150-15-15	990	814	340	620	410	505	150
13	QSZ75-35-22	1370	1105	502	925	650	505	100
14	QSZ75-45-22	1370	1105	502	925	650	545	100
15	QSZ100-25-22	1401	1135	535	883	630	568	100
16	QSZ150-22-22	1401	1135	535	883	630	551	150
17	QSZ200-15-22	1375	1110	507	870	630	605	150
18	QSZ100-35-30	1452	1144	425	832	630	605	100
19	QSZ140-30-30	1452	1144	425	832	630	605	100
20	QSZ200-25-30	1460	1148	469	835	630	640	150
21	QSZ250-20-30	1460	1148	469	835	630	640	150
22	QSZ100-45-37	1560	1170	485	950	650	640	100
23	QSZ100-50-37	1560	1170	485	950	650	640	100
24	QSZ300-20-37	1567	1170	510	1070	595	775	150
25	QSZ100-60-45	1670	1230	495	1050	680	665	100
26	QSZ200-30-45	1699	1255	495	1006	665	650	150
27	QSZ150-45-55	1692	1248	488	1011	678	640	150
28	QSZ250-35-55	1699	1255	495	1006	665	650	150
29	QSZ300-30-55	1699	1255	495	1006	665	650	150
30	QSZ600-15-55	1720	1275	515	1052	711	675	250
31	QSZ150-55-75	1835	1380	482	1115	800	715	150
32	QSZ150-60-75	1835	1380	482	1115	800	715	150
33	QSZ200-45-75	1904	1425	488	1011	678	640	150
34	QSZ200-55-75	1835	1380	482	1115	800	715	150
35	QSZ350-35-75	1883	1404	485	1332	690	947	200
36	QSZ400-25-75	1888	1410	485	1422	665	1047	200

安装尺寸表 INSTALLATION SIZE TABLE

序号 No.	型号 Type	A mm	B mm	C mm	L mm	L1 mm	L2 mm	胶管联接 Rubber tube connection
								Φd (mm)
37	QSZ200-60-90	1835	1380	482	1115	800	715	150
38	QSZ200-55-90	1835	1380	482	1115	800	715	150
39	QSZ300-45-90	1883	1380	482	1115	800	715	150
40	QSZ300-50-90	1922	1420	490	1540	849	1110	150
41	QSZ400-40-90	1940	1430	500	1580	850	1150	200
42	QSZ500-25-90	1888	1410	485	1422	665	1047	200
43	QSZ450-30-90	1888	1410	485	1422	665	1047	200
44	QSZ500-35-110	2245	1570	520	1180	750	1020	200
45	QSZ600-30-110	2245	1570	520	1180	750	1020	250
46	QSZ800-25-110	2407	1725	626	1640	854	1207	300
47	QSZ1000-18-110	2407	1725	626	1640	854	1207	300
48	QSZ780-26-110	2407	1725	626	1640	854	1207	300
49	QSZ400-60-132	2328	1665	520	1540	849	1117	200
50	QSZ500-45-132	2320	1656	472	1124	823	739	200
51	QSZ500-55-132	2320	1656	472	1124	823	739	200
52	QSZ800-35-132	2538	1784	601	1581	802	1117	300
53	QSZ1000-22-132	2465	1801	626	1640	854	1207	300
54	QSZ1250-15-132	2538	1784	601	1581	802	1177	300
55	QSZ600-50-160	2673	1772	472	1124	823	739	200
56	QSZ650-52-160	2673	1772	472	1124	823	739	200
57	QSZ1250-25-160	2890	1990	672	1600	820	1180	350
58	QSZ1000-30-160	2891	2137	601	1581	802	1177	300
59	QSZ1750-15-185	2900	2140	652	1660	820	1260	350
60	QSZ600-55-200	2673	1772	472	1140	823	739	250
61	QSZ800-45-200	2934	1993	710	1686	900	1229	300
62	QSZ1000-40-200	2934	1993	710	1686	900	1229	300
63	QSZ1500-20-200	3060	2049	672	1770	870	1850	350
64	QSZ2000-20-200	3060	2049	672	1880	870	1896	400
65	QSZ800-55-220	2934	1993	710	1686	900	1229	300
66	QSZ1250-35-220	2922	2021	730	2150	977	1630	350
67	QSZ1000-50-250	2980	2081	710	2250	987	1730	300
68	QSZ1500-35-250	3012	2111	730	2150	977	1630	350
69	QSZ1750-30-250	3012	2111	730	2150	977	1630	350
70	QSZ1500-40-280	3058	2159	710	2250	987	1730	350
71	QSZ1750-40-315	3235	2261	804	2180	1026	1650	350
72	QSZ2000-35-315	3235	2261	804	2260	1026	1730	400

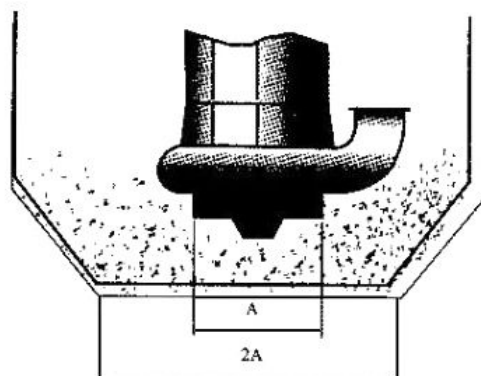
水中搅拌效果示意图

The diagram of mixing effect in water



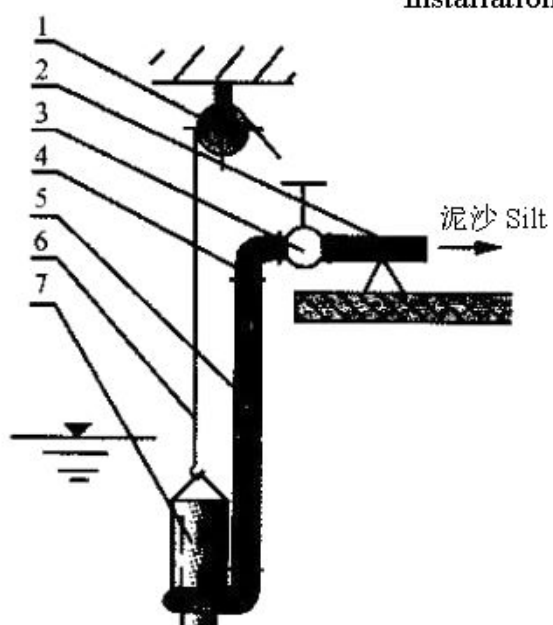
带搅拌叶轮电泵安全搅拌范围

Security stirring scope of pump with mixing impeller



安装示例图 1

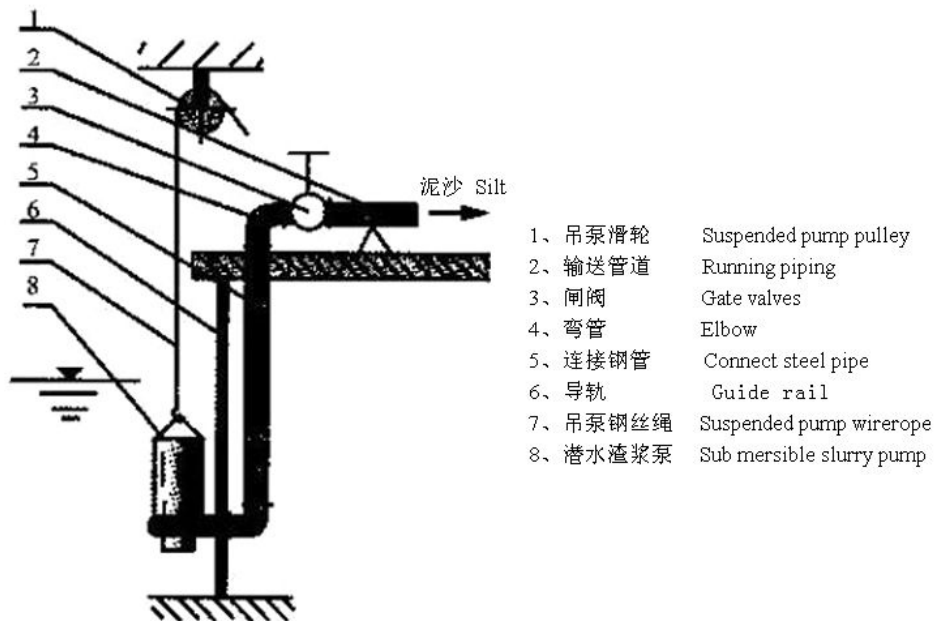
Installation example Figure 1



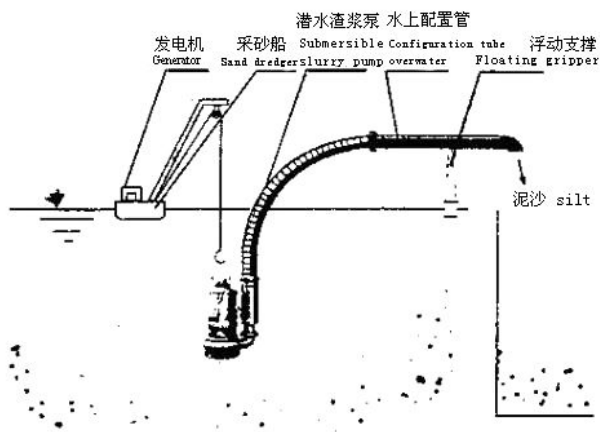
- | | |
|---------|-------------------------|
| 1、吊泵滑轮 | Suspended pump pulley |
| 2、输送管道 | Running piping |
| 3、闸阀 | Gate valves |
| 4、弯管 | Elbow |
| 5、软管 | Hose |
| 6、吊泵钢丝绳 | Suspended pump wirerope |
| 7、潜水渣浆泵 | Submersible slurry pump |

安装示例图 2

Installation example Figure 2

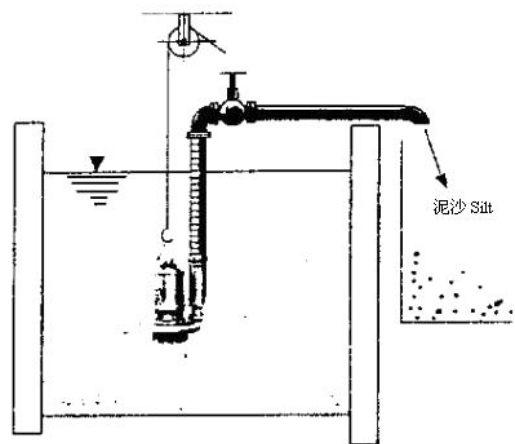


江河湖海、池塘、引水工程中泥沙的清除或航道清淤
Sediment removal or waterway dredging for rivers
and lakes, ponds, water diversion engineering

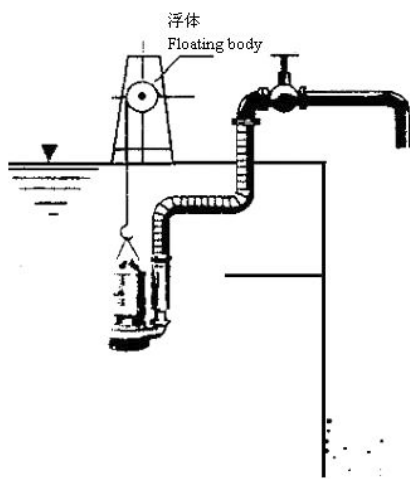


大口径深井的排污清淤

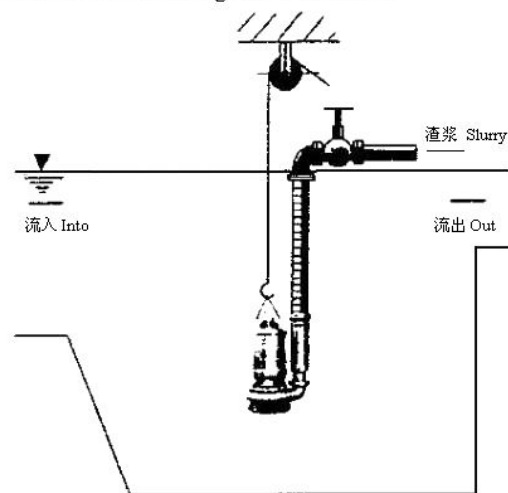
Large-diameter deep well drainage desilting



江河沙桩工程
River sand pile engineering



钢厂、电厂、矿山邓沉淀池渣浆及
挖掘工程及水中泥浆、砂石的排除各种
Steel mills, power plants, mining and other
tank slurry and all kinds of mining engineering
and removed mud, sand gravel in the water



使用条件 CONDITIONS OF USAGE

- 1、电源为 50HZ、380V 三相交流电源。
- 2、介质的最高温度不得高于 40℃，介质中不含易燃易爆性气体。
- 3、介质中固体颗粒的最大体积浓度为 30%，最大介质密度为 1.2kg/L。
- 4、机组最大潜水深度一般不大于 20 米，最小潜水深度以淹没电机为准。
- 5、机组在介质以立式工作为好，运行方式为连续运转。

注：当现场条件不符合上述规定时，请在订货时说明，可根据要求定制。

1. Power supply 50Hz , 380V , 3-phase , AC power .
 2. The highest temperature of medium shall not exceed 40 ℃, the medium does not contain flammable gases.
 3. The maximum volume of concentration solid particles is 30% in medium and the maximum medium density is 1.2kg / L.
 4. The unit maximum diving depth does not exceed the 20 meters, the minimum diving depth to drown motor prevail.
 5. Unit in the medium with vertical to work for good , operating mode for continuous operation.
- Note: When site conditions does not comply with above provisions, please note when ordering, can be customized according to requirements .

安装与使用 INSTALLMENT AND OPERATION

安装前的检查及注意事项 Pre-installation inspection and precautions

- (1) 运行环境应符合使用条件的规定。
- (2) 实际流量、扬程应与性能曲线吻合，最佳流量范围为额定流量的 80%-120%；流量超过额定流量的 120%有可能导致机组严重损坏。
- (3) 检查机组的装配质量是否良好，紧固件有无松动现象，电缆有无破损，电源及电器设备是否可靠。
- (4) 检查电源电压、频率是否和铭牌要求相符；检查启动、控制、保护设施是否齐备完好。
- (5) 检查油室中的油量是否适中，机组在立式位置时油位应到注油口，否则应注入汽轮机油至适量。
- (6) 带冷却罩的潜水渣浆泵开机时必须确保持续注入清洁冷水，并确保排水口畅通，冷却水从冷却装置下端一侧流入，从另侧上端流出。
- (7) 用 500V 兆欧表测量电机冷态绝缘电源不低於 50MΩ。
- (8) 注意事项：

机组正常运转后，应随时观察电源电压、工作电流、水泵流量及电泵振动是否正常。如发生下列情况之一者应立即停机检查：

- (a) 工作电流超过额定电流。
- (b) 额定扬程时，流量降低 20%或泵间断出水时。
- (c) 电泵工作时，不带冷却装置电泵的电机部分露出水面，或带冷却装置电泵的蜗壳部分露出水面时。

- (1). Operating environment should be consistent with the provisions of the conditions of use.
- (2). Actual flow and head should be consistent with the performance curve, the range of optimum flow is 80% -120% of rated flow ; flow exceeds 120% of rated flow may result in serious damage to the unit.
- (3). Check the unit's assembly quality is good, without loosening fasteners, cables without damage, power and electrical equipment is reliable.
- (4). Check the power supply voltage, frequency and nameplate requirements are consistent; Check the starter, control, protection facilities are complete intact.
- (5). Check the oil in the oil chamber is moderate, the unit in a vertical position, the oil level should go to the fuel inlet, or else, should be injected turbine oil to be right amount.
- (6). Submersible slurry pump with cooling jacket must ensure continuous into the clean cold water when power-on , ensure drain smoothly , cooling water from the cooling unit bottom side of the inflow from the other side of the upper end of the outflow.
- (7). With 500V megameter to test motor not less than 50MΩ cold insulation power .
- (8). Notes:
Normal operation of the unit, it should be observed at any supply voltage, current, pump flow and pump vibration is normal. As one of the following occurs should immediately stop check:
(a) operating current exceeds the rated current.
(b) rated head, the flow rate is reduced by 20%, or when the water pump is interrupted.
(c) pump work, without cooling unit out of the water pump motor parts, or volute pump with cooling device partially exposed surface of the water.

(d) 电源电压过高或过低时（高压 400V 或低于 340V）。

(e) 电机绝缘电阻低于 $5M\Omega$ 时。

(f) 机组有明显的振动和噪声时。

安装 Installation

(1) 电气接线:

(a) 电泵动力电缆为四芯，三根电源线，一根接地线；配有保护装置的电泵带有相应的控制电缆；电泵电缆的芯线都有标志不同功能的标识牌，见下表 1

严格按照各标识牌标明的芯线与控制柜相同标识的接线柱接线。用万用表检查各芯线与各自接地线的电阻值应符合上表的规定。接地线必须可靠接地。

(b) 安装过程中应随时检测绝缘电阻，下井后检测电机绝缘电阻不得小于 $5M\Omega$ ；接好电器设备方可启动。

(c) 接通电源，如泵出水少，则电泵有可能接反，停机调换三相电源线任意两根接头。

(2) 安装方式:

安装方式为移动式安装，将电泵立式直立悬吊放入水中，放置应平稳；然后系好电缆，泵出口连接好管路；此方法安装简单、移动方便。

(d) Power supply voltage is too high or too low (high voltage 400V or below 340V).

(e) when the motor insulation resistance below $5M\Omega$.

(f) the unit has noticeable vibration and noise.

(1). Electrical wiring

(a) Pump power cables for the four cores, three power lines, a ground wire; pump equipped with a protective device with corresponding control cables; pump cable cores have different functions signage signs, see below table :

In strict accordance with the identification card cores indicated the same identity with the control cabinet wiring terminals. With a multimeter check the ground wire core wire with the respective resistance values should be consistent with the requirements of the table. Ground wire must be grounded.

(b) It should be always test insulation resistance during installation, detecting the motor insulation resistance shall not be less than $5M\Omega$ after descend the well ; Connect the electrical equipment will be enabled.

(c) power-on , such as the pump less water , the pump may be connected in reverse, stop swap any two connector of three-phase power cable .

(2). Install Way:

Installation for the mobile installation, the pump upright vertical suspended into the water, place should be smooth; then fasten the cable, connect the pump outlet pipe; this method easy to install, easy to move.

表 1

类型	标识	芯线名称	芯线功能	电缆长度	电缆芯线对其接地线的绝缘电阻
动力电缆	U、V、V	三相电源芯线	控制三相电源	10m	∞
		接地芯线	和地接线		与外壳一体
控制电缆	WC	热保护芯线	接热保护器	10m	0
	YS	油头探头芯线	接油水探头		∞
	XL	泄漏保护芯线	接浮子开关		∞
	JS	泄漏信号线	接油水探头		∞
	ZC	轴温信号线	接热保护器		0

Type	Identify	Core wire name	Core wire function	Cable length	Its grounding cable core insulation resistance
Power cable	U、V、V	3-phase power supply core wire	Control 3-phase power supply	10m	∞
		Grounded core wire	Ground wiring		Integrally with the housing
Control cable	WC	thermal protection core wire	Connect heat protection	10m	0
	YS	Oil probe head core wire	Connect oil and water probe		∞
	XL	Leakage protection core wire	Connect float switch		∞
	JS	Leakage signal lines	Connect oil and water probe		∞
	ZC	Shaft temperature signal lines	Connect thermal protector		0

装配、拆卸 ASSEMBLY AND DISASSEMBLE

装配顺序:

- 1、将“O”形密封圈装在油室上，装好转子部件，再装上定子部分
- 2、装好电机上端盖，并将电缆座组装好，再装上吊环螺钉与提把
- 3、装上电缆护套，相序标志牌与接地标牌
- 4、反头装好机械密封，后泵盖，机械密封座
- 5、装上耐磨套与油封
- 6、装上键和副叶轮、内泵盖并套上“O”形密封圈
- 7、装上叶轮及叶轮压板，然后再装上泵体
- 8、装上进水支架，轮廓和吸砂板
- 9、装上橡胶环及搅拌叶轮，然后装上底座
- 10、拆卸时可参照装配程序，反响进行

Assembly sequence:

1. The "O" ring seal mounted on the oil chamber, installed rotor components, and then loaded on the stator part.
2. Installed on the motor cover and cable seat assembled, then fitted with lifting bolts and carrying handle .
3. Fitted with cable sheathing, phase sequence and ground signage signs .
4. Anti-head installed mechanical seal, rear pump cover, mechanical seal seat .
5. Fitted with wear sleeve and oil seal.
6. Fitted key and expeller , replace the "O" ring seal inside the pump cover .
7. Install the impeller and impeller plate, then the pump casing.
8. Install the suction support, outline and suction plate.
9. Install rubber ring, and agitator, then the base plate.
10. When dis-assembly, just reverse the assembly process.

质量保证 QUALITY ASSURANCE

在输送介质符合泵的过流部件材质要求, 用户恰当的遵守本使用说明书的条件下, 从本厂发货之日 18 个月, 连续运转不超过 12 个月, 产品因制造不良而发生损坏或不能正常工作时, 本厂免费为用户更换或修理产品, 易损件的正常磨损不在此限。

In the transmission medium pump wet parts meet material requirements, the user under the conditions of proper compliance with this manual , the date of shipment from the factory 18 months continuous operation not exceeding 12 months, the product was damaged due to ill manufacturing or does not work, the factory to replace or repair the product free charge for users , except normal wear and tear of wearing parts

可能发生的故障及其解决方法

故障现象	可能产生的原因	解决方法
电流偏高超过额定电流	1. 水泵有擦坑	1. 调整间隙
	2. 装置扬程太低，水泵偏大流量运行	2. 阀门控制流量或更换和合适扬程水泵
	3. 轴承损坏	3. 更换轴承
启动时电机不转有嗡嗡声	1. 电压过低	1. 调整电压至额定值
	2. 电机单相运转	2. 检查线路，接通断线
	3. 泵内有异物卡死	3. 清除异物
	4. 叶轮与内泵盖或吸水板相磨	4. 调整叶轮间隙至正常值
不出水或出水量少	1. 叶轮反转	1. 调换任意两相电源线
	2. 滤水网被堵塞	2. 清除堵塞物
	3. 进水口露出水面	3. 调低泵位置至淹没
	4. 输水管泄漏或堵塞	4. 更换输水管或清除杂物
	5. 实际扬程太高	5. 选取合适扬程的泵
绝缘电阻降至 $0.5M\Omega$ 以下	1. 电缆接头损坏	1. 重新处理电缆接头
	2. 定子绕组绝缘损坏	2. 更换定子绕组
	3. 电机腔内进水	3. 排除水分，烘干绕组
	4. 电缆损坏	4. 修复电缆
运行不平稳振动严重	1. 叶轮严重磨损	1. 更换叶轮
	2. 杂物卡住转动部件	2. 清除杂物
	3. 轴承损坏	3. 更换轴承

THE POSSIBILITY OF FAILURE AND ITS SOLUTION

Faults	Reasons	Solution
Current higher than rated current	1.Pump there are scratches	1.Adjust the gap
	2.Device head is too low, the pump is too large flow	2.Flow control valve or replacement suitable lift pump
	3.Bearing damage	3.Replace bearings
Start the motor does not turn, there is buzz	三	1.Adjust the voltage to the rated
	2.Single-phase motor running	2.Check the line, connected disconnection
	3.There are foreign body stuck inside the pump	3.Removal
	4.Impeller and inside pump cover or suction water plate	4.Adjust the impeller clearance to normal
No water or less water	1.Reverse impeller	1.Exchange any two-phase power cords
	2.Water filter blocked	2.Clear blockage
	3.Water inlet above the water	3.Lowered position to the submerged pump
	4.Pipes leak or blockage	4.Replacement pipes or clearing debris
	5.Actual head is too high	5.Select the appropriate head pump
Insulation resistance dropped below 0.5 M Ω	1.Cable connector is damaged	1.Reprocessing cable connector
	2.Stator winding insulation damage	2.Replace stator winding
	3.Motor cavity into the water	3. Exclude moisture, drying the windings
	4.Cable damage	4.Fix the cable
Running is not smooth, severe vibration	1.Impeller serious wear and tear	1.Replacement impeller
	2.Debris jammed rotating parts	2.Clear debris
	3.Bearing damage	3.Replace bearings

保养、维修 MAINTENANCE

- 1、机组长期不用时，应及时提出，擦拭干净表面，清除滤网杂物，涂上防锈油，放在干燥通风处。
- 2、机组在连续或累计运行满 2500 小时后，应检查紧固件、密封情况，及时更换油室中的汽轮机油和机械密封。
- 3、电泵使用满一年后，须提出检修：及时更换油封、叶轮、搅拌叶轮、内泵盖、吸水板等易损件。
- 4、机组重新拆装后，电机内腔及油室内必须打 0.2Mpa 的气压试验，5 分钟不得有泄漏现象。

1. When the unit unused for a long time , shall be bring out timely , wipe clean surface, Remove strainer sundry, painted rust oil, stored in a dry ventilated place.
2. Units in a continuous or cumulative run full 2500 hours, should be check fasteners, seals, and timely replacement of turbine oils and mechanical seal from the oil chamber .
3. Pump use after a full year shall propose overhaul: replacement of oil seals timely, impellers, mixing impeller, inside the pump cover, suction water plate and other wearing parts.
4. The unit after disassembling, the motor cavity and the oil chamber must fight 0.2Mpa pressure test, 5 minutes can not have leaks.

易损件明细表 WEARING PARTS LIST

表 2

序号	名称	单台用量	备注
1	蜗壳	1 个	耐磨材质
2	叶轮	1 个	耐磨材质
3	搅拌叶轮	1 个	耐磨材质
4	内泵壳	1 个	耐磨材质
5	吸水板	1 个	耐磨材质
6	机械密封	1 套	
7	油封	1 组	

No.	Parts Name	Unit Qty	Remark
1	Volute casing	1	Wear-resistant material
2	Impeller	1	Wear-resistant material
3	Mixing impeller	1	Wear-resistant material
4	Pump casing	1	Wear-resistant material
5	Suction water plate	1	Wear-resistant material
6	Mechanical seal	1set	
7	Oil seal	1set	

订购成套产品、配套供应范围

ORDER SCOPE OF SUPPLY COMPLETE SETS AND ANCILLARY OF GOODS

用户可以根据需要，订购下列成套范围的全部或一部分，用户在订货合同中标明：

- 1、QSZ 型潜水渣浆泵主机一台、《QSZ 型潜水渣浆泵使用说明书》一份、《合格证》一份、《装箱清单》一份。
- 2、启动控制柜一台、《启动控制柜使用说明书》一份、《合格证》一份。
- 3、输水管分输水钢管和输水胶管两种。
输水钢管包括直管、弯管、胶垫、螺栓、螺母、垫圈等。输水胶管包括胶管接头、胶管卡子、胶管等。
- 4、易损件
- 5、必备的专用工具

Users can be order the following sets of all or part of the range according to need , the user indicated in the contract:

1. One set of QSZ submersible slurry pump, a copy of 《 QSZ submersible slurry pump operating manual》 , a copy of 《conformity certificate 》 , a copy of 《packing list》 .
2. One set of start control cabinet, 《start control cabinet operating manual》, a copy of 《conformity certificate》 .
3. Two kinds of pipes for convey water , steel pipe and rubber tube .
Steel pipe for convey water include straight pipe , elbow , rubber gasket , bolts , nuts and washers etc. .
Rubber tube include rubber tube connector , rubber tube clamp , rubber tube etc.
4. Wearing parts
5. Necessary dedicated tools

定货须知 ORDERING INSTRUCTION

- 1、定货时请注明产品规格、成套范围。
- 2、蜗壳、叶轮、搅拌叶轮、内泵盖、吸水板、机械密封、油封等易损件，用户可根据需要单独购买以备急用。
- 3、如果用户的使用现场不符合第五条中使用条件的规定如电压、频率不符或水质不符等情况，用户均可提出要求进行特殊定货。

1. When ordering, please indicate the product specifications, sets of range.
2. Volute casing, impeller, mixing impeller, inside the pump cover, suction water plate, mechanical seals, oil seals and other wearing parts, users according to the need to be purchased separately for emergencies.
3. If the user's on site of application does not comply with Article V of the provisions on the use's condition such as voltage, frequency discrepancies or water quality does not match, etc., users can request for special orders.

