



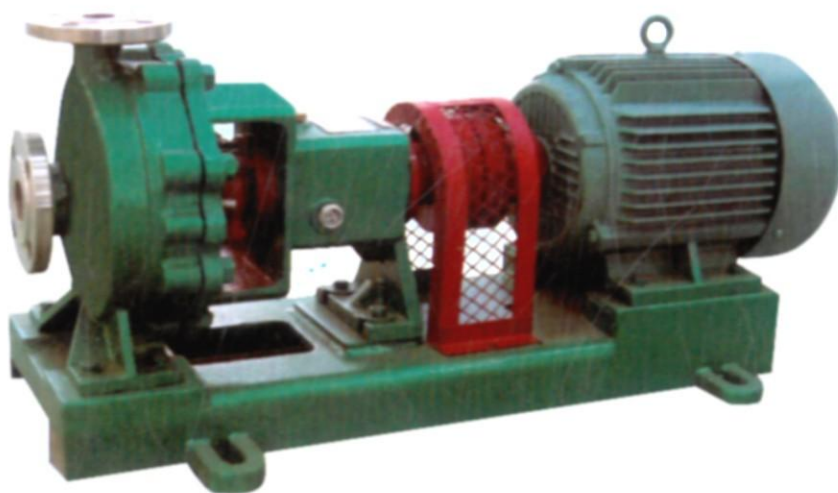
JINGLUN BENG YE

HYCPN 型耐腐耐磨无堵塞泵

HYCPN CORROSION-RESISTANT WEAR-RESISTANT NON-CLOGGING PUMP

安装使用说明书

INSTALLATION AND OPERATION INSTRUCTIONS



江苏精伦泵业制造有限公司

JIANGSU JINGLUN PUMP MANUFACTURING CO., LTD

一、性能范围(按设计点) Performance range (as design point)

流量: $Q = 1.6 - 400\text{m}^3/\text{h}$

Flow capacity: $Q = 1.6 - 400\text{m}^3/\text{h}$

扬程: $H = 5 \sim 125\text{m}$

Delivery lift : $H = 5 \sim 125\text{m}$

工作压力: $P \leq 1.6\text{MPa}$

Working pressure: $P \leq 1.6\text{MPa}$

工作温度: $t = 20 \sim + 150^\circ\text{C}$

Working temperature : $t = 20 \sim + 150^\circ\text{C}$

二、适用行业 Applicable industry

氯碱、纯碱工业;

医学、化肥、农药;

石油化工、化纤、造纸工业;

染料工业;环保工程及水处理系统

Chlor - alkali, sodium carbonate industry;

Medical science, Fertilizer, pesticide;

Petrochemical, chemical fiber, paper making industry;

Dyeing industry, environmental protection engineering, water treatment system

三、结构形式 Structure

卧式后开门结构,泵头与电机采用联轴器连接,安装在底板上,叶轮为后开式,三只轴承,轴封采用外装式机械密封,设有冷却装置,轴承体的油位用油镜观察;结构紧凑合理。该泵在泵体上铸有支脚,可承受来自管路的荷载并直接传给基础,这样泵转子不会因泵承受荷载而产生弯曲,从而保证了轴承和机械密封具有最佳的使用寿命。维修时不需将与泵体相联的管路打开,只要打开托架与泵体的螺栓,将两者分开就可维修叶轮和机械密封,简易方便。

泵的旋转方向:从电机端朝泵看,顺时针方向旋转。

It is of horizontal rear - open structure, pump head is in direct connection with motor, and installed on bottom plate, impeller is rear - open type, there're three bearings. Shaft seal adopts external installed mechanical seal, equipped with cooling device. Oil lever of bearing can be monitored from oil lens. In general, it features compact and rational structure. There's support casted with pump body, available to bear load of pipeline and transit directly to foundation. Pump rotor will not be deformed due to load assumed by pump to assure optimum service life of bearing and mechanical seal. As maintenance, no need to

disassemble pipeline in connection with pump body, as long as disconnect bolt of bracket and pump body to maintain impeller and mechanical seal conveniently.

Rotation direction: clockwise viewed from motor side.

四、特点 Feature

该系列泵是我公司引进国外先进技术研制而成(专利号:ZL200920234492.5)。

可输送含有固体颗粒,易结晶的介质,耐温、耐腐、无堵塞。由于叶轮为后开式特殊结构,泵运转时产生负压,因此机封使用寿命是同类产品的2-3倍。

This series pump is developed combined with overseas advanced technology (Patent no.: ZL200920234492.5)

Applicable to convey media with solid particle, crystallized media free from clogging, with heat resistance, corrosion resistance. Due to open impeller after special structure, operation the pump produced when negative pressure, and therefore machine sealing congener product service life is 2-3 times.

五、密封型式 Sealing type

机械密封或填料密封。

Mechanical seal or packing seal.

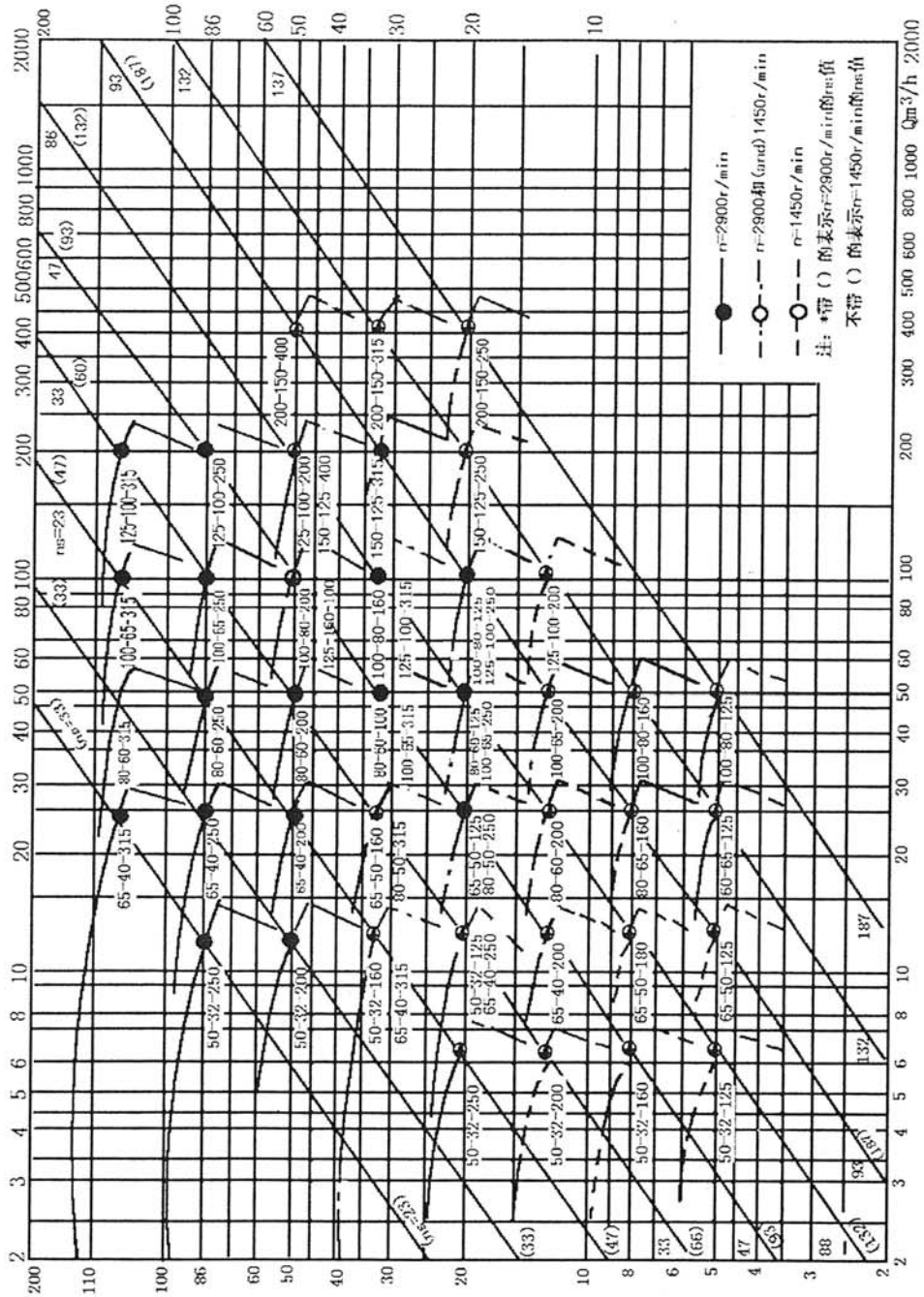
六、泵与介质接触的主要零件材质如下

Material of main components contacting with media as follows

ZG1Cr18Ni9 ZG1Cr18Ni9Ti ZG0Cr18Ni12Mo2Ti ZG1Cr18Ni12Mo2Ti ZG00Cr14Ni14Si4
ZG00Cr18Ni10 ZGCr28 ZG1Cr18Mn13Mo2uN 以及 316、316L、Monel 等。

ZG1Cr18Ni9 ZG1Cr18Ni9Ti ZG0Cr18Ni12Mo2Ti ZG1Cr18Ni12Mo2Ti ZG00Cr14Ni14Si4
ZG00Cr18Ni10 ZGCr28 ZG1Cr18Mn13Mo2uN, and 316, 316L, Monel

七、泵的性能曲线 Performance curve



HYCPN 系列耐温耐腐无堵塞碱泵工作性能参数

Performance parameter of HYCPN series of heat - resistant wear - resistant non clogging alkali pump

(表 1) Table 1

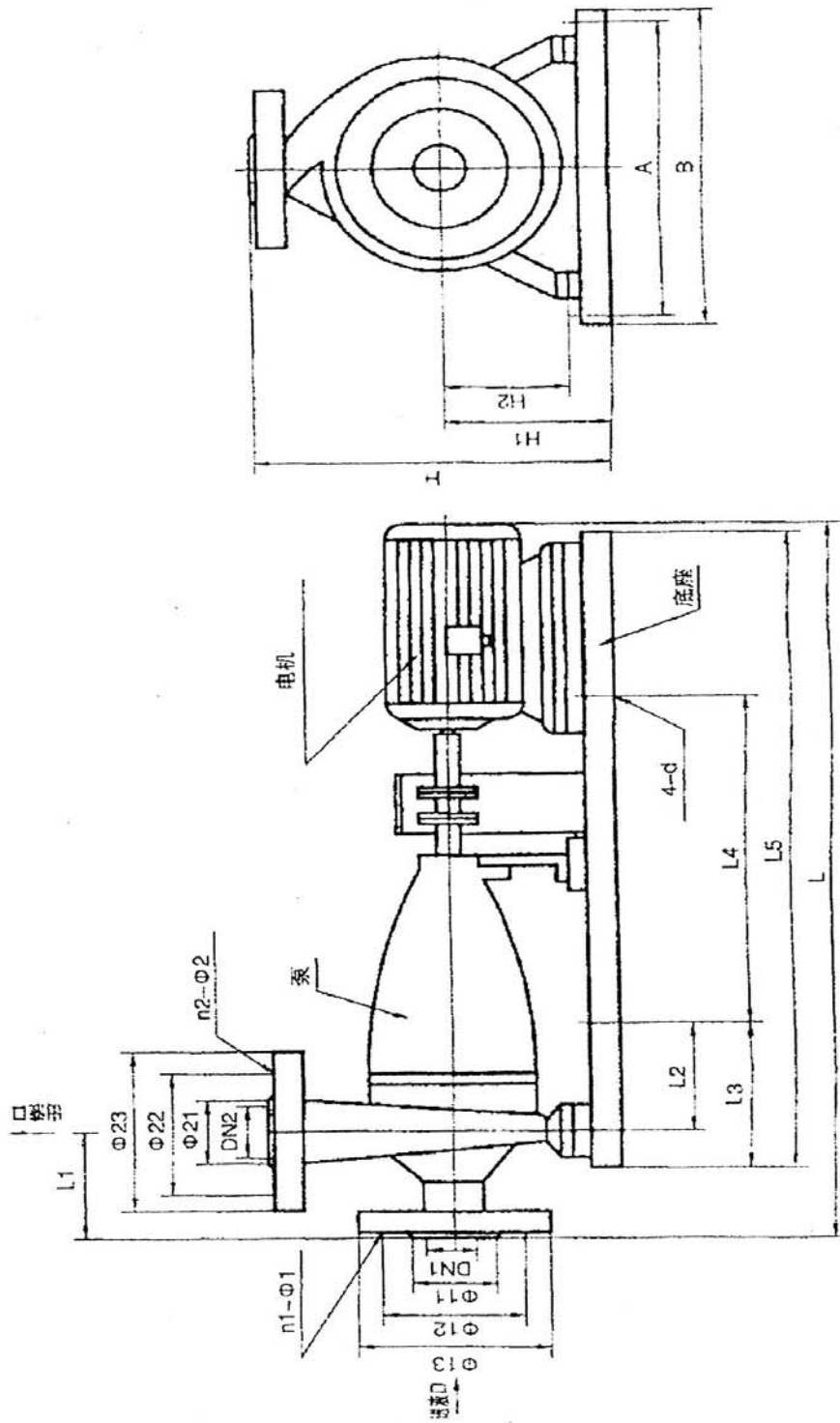
型 号 Type	流量Flow capacity		扬程 Head H (m)	转速 Speed n (r/min)	功率N(kw)Power		效率 Efficiency η (%)	允许汽 蚀余量 Allowance cavitation corrosive (m)	叶轮 直径 Impeller diameter D(mm)
	(m ³ /h)	(L/S)			轴功率 Shaft power	电机功率 Motor power			
25-25-125	1.6	0.44	5	1450	0.05	0.55	45	1.0	125
25-25-160			8		0.09	0.55	37		160
25-25-200			12.5		0.155	0.75	35		200
25-25-250			20		0.26	1.5	33		250
40-32-125	3.2	0.89	5		0.09	0.55	46	1.0	125
40-32-160			8		0.17	0.75	42		160
40-32-200			12.5		0.29	1.1	38		200
40-32-250			20		0.49	2.2	35		250
50-32-125	6.3	1.75	5		0.19	0.55	45	1.0	125
50-32-160			8		0.34	0.75	40		160
50-32-200			12.5		0.65	1.5	33		200
50-32-250			20		1.27	2.2	27		250
65-50-125	12.5	3.47	5		0.31	0.55	55	1.2	125
65-50-160			8		0.53	0.75	51		160
65-40-200			12.5		0.93	1.5	46		200
65-40-250			20		1.75	3	39		250
65-40-315			32		3.3	5.5	33		315
80-65-125	25	6.94	5		0.53	0.75	64	1.4	125
80-65-160			8		0.88	1.5	62		160
80-50-200			12.5		1.49	2.2	57		200
80-50-250			20	2.569	4	53	250		
80-50-315			32	5.067	7.5	43	315		
100-80-125	50	13.88	5	0.92	1.5	74	1.7	125	
100-80-160			8	1.58	2.2	69		160	
100-65-200			12.5	2.5	4	68		200	
100-65-250			20	4.3	5.5	65		250	
100-65-315			32	7.5	11	58		315	
125-100-200	100	27.77	12.5	4.66	7.5	73	2.2	200	
125-100-250			20	7.56	11	72		250	
125-100-315			32	12.82	18.5	68		315	
125-100-400			50	22.69	30	60		400	
150-125-250	200	55.55	20	14.1	18.5	77	3.2	250	
150-125-315			32	23.2	30	75		315	
150-125-400			50	38.9	45	70		400	
200-150-250	400	111.1	20	26.9	37	81	4.5	250	
200-150-315			32	44.1	55	79		315	
200-150-400			50	69.8	90	78		400	

HYCPN 系列耐温耐腐无堵塞碱泵工作性能参数

Performance parameter of HYCPN series of heat - resistant wear - resistant non clogging alkali pump

(表 1) Table 1

型号 Type	流量Flow capacity		扬程 Head H (m)	转速 Speed n (r/min)	功率N(kw)Power		效率 Efficiency η (%)	允许汽 蚀余量 Allowance cavition corrosive (m)	叶轮 直径 Impeller diameter D(mm)
	(m ³ /h)	(L/S)			轴功率 Shaft power	电机功率 Motor power			
25 - 25 - 125	3.2	0.89	20	2900	0.33	1.1	53	1.8	125
25 - 25 - 160			32		0.61	2.2	46		160
25 - 25 - 200			50		1.01	4	43		200
25 - 25 - 250			80		1.74	7.5	40		250
40 - 32 - 125	6.3	1.75	20		0.66	1.5	52	1.8	125
40 - 32 - 160			32		1.17	3	47		160
40 - 32 - 200			50		2.26	5.5	38		200
40 - 32 - 250			80		4.28	11	32		250
50 - 32 - 125	12.5	3.47	20		1.33	3	51	1.8	125
50 - 32 - 160			32		2.37	4	46		160
50 - 32 - 200			50		4.38	7.5	39		200
50 - 32 - 250			80		8.25	15	33		250
65 - 50 - 125	25	6.94	20		2.2	3	62	2.0	125
65 - 50 - 160			32		3.82	5.5	57		160
65 - 40 - 200			50		6.55	11	52		200
65 - 40 - 250			80		11.84	18.5	46		250
65 - 40 - 315			125		21.8	30	39		315
80 - 65 - 125	50	13.88	20		3.95	5.5	69	2.4	125
80 - 65 - 160			32		6.5	11	67		160
80 - 50 - 200			50		10.8	15	63		200
80 - 50 - 250			80	19.11	30	57	250		
80 - 50 - 315			125	36.21	45	47	315		
100 - 80 - 125	100	27.77	20	7.074	15	77	3.2	125	
100 - 80 - 160			32	11.9	22	73		160	
100 - 65 - 200			50	18.9	37	72		200	
100 - 65 - 250			80	32.0	55	68		250	
100 - 65 - 315			125	54.9	75	62		315	
125 - 100 - 200	200	55.55	50	35.4	45	77	4.5	200	
125 - 100 - 250			80	58.1	75	75		250	



HYCPN系列耐温耐腐无堵塞碱泵安装外形图

Outline of HYCPN series of heat - resistant wear - resistant non clogging alkali pump

泵型号	配用电动机型号	L1	L2	L3	L4	L5	L	H1	H2	H	A	B	4-d	进液口法兰				出液口法兰								
														DN1	Φ11	Φ12	Φ13	n-Φ1	DN2	Φ21	Φ22	Φ23	n2-Φ2			
25-25-125	Y802-2/1.1	80	15	100	600	850	893	192	112	332	350	390	4-Φ19													
	Y801-4/0.55	80	15	100	600	850	860	192	112	332	350	390	4-Φ19													
25-25-160	Y90L-2/2.2	80	15	100	600	850	915	212	132	372	350	390	4-Φ19													
	Y801-4/0.55	80	15	100	600	850	870	212	132	372	350	390	4-Φ19													
25-25-200	Y132S1-2/5.5	80	75	160	600	870	987	240	160	420	350	390	4-Φ19													
	Y802-4/0.75	80	15	100	600	850	930	240	160	420	350	390	4-Φ19													
25-25-250	Y132S2-2/7.5	100	80	160	840	1170	1255	280	180	505	490	540	4-Φ19													
	Y90L-4/7.5	100	120	220	620	1000	950	270	180	495	460	520	4-Φ19													
40-32-125	Y90S-2/1.5	80	15	100	600	850	910	192	112	332	350	390	4-Φ19													
	Y801-4/0.55	80	15	100	600	850	910	192	112	332	350	390	4-Φ19													
40-32-160	Y100L-2/3	80	75	160	600	870	987	212	132	372	350	390	4-Φ19													
	Y801-4/0.55	80	15	100	600	850	900	212	132	372	350	390	4-Φ19													
40-32-200	Y132S1-2/5.5	80	55	140	740	1000	1300	240	160	420	440	490	4-Φ19													
	Y90S-4/1.1	80	15	100	600	850	1000	240	160	420	350	390	4-Φ19													
40-32-250	Y160M1-2/15	100	80	160	840	1170	1255	280	180	505	490	540	4-Φ19													
	Y100L1-4/2.2	100	120	220	640	1000	1080	270	180	495	460	520	4-Φ19													

泵型号	配用电动机型号	L1	L2	L3	L4	L5	L	H1	H2	H	A	B	4-d	进液口法兰				出液口法兰								
														DN1	Φ11	Φ12	Φ13	n-Φ1	DN2	Φ21	Φ22	Φ23	n2-Φ2			
50-32-125	Y90L-2/2.2	80	15	100	600	850	893	192	112	332	350	390	4-Φ19													
	Y801-4/0.55	80	15	100	600	850	860	192	112	332	350	390	4-Φ19													
50-32-160	Y112M-2/4	80	15	100	600	850	915	212	132	372	350	390	4-Φ19													
	Y802-4/0.75	80	15	100	600	850	870	212	132	372	350	390	4-Φ19													
50-32-200	Y132S ₂ -2/7.5	80	75	160	600	870	987	240	160	420	350	390	4-Φ19													
	Y90L-4/1.5	80	15	100	600	850	930	240	160	420	350	390	4-Φ19	50	99	125	165	4-Φ17.5	32	76	100	140	4-Φ17.5			
50-32-250	Y160M ₂ -2/15	100	80	160	840	1170	1255	280	180	505	490	540	4-Φ19													
	Y100L ₁ -4/2.2	100	120	220	620	1000	950	270	180	495	460	520	4-Φ19													
65-50-125	Y100L-2/3	80	15	100	600	850	910	192	112	332	350	390	4-Φ19													
	Y801-4/0.55	80	15	100	600	850	910	192	112	332	350	390	4-Φ19													
65-50-160	Y132S ₁ -2/5.5	80	75	160	600	870	987	212	132	372	350	390	4-Φ19													
	Y90S-4/1.1	80	15	100	600	850	900	212	132	372	350	390	4-Φ19													
65-40-200	Y160M ₁ -2/11	100	55	140	740	1000	1300	240	160	420	440	490	4-Φ19													
	Y90L-4/1.5	100	15	100	600	850	1000	240	160	420	350	390	4-Φ19													
65-40-250	Y160L-2/18.5	100	80	160	840	1170	1255	280	180	505	490	540	4-Φ19													
	Y100L ₂ -4/3	100	120	220	640	1000	1080	270	180	495	460	520	4-Φ19													
65-40-315	Y200L ₁ -2/30	125	120	220	940	1240	1430	300	200	550	550	610	4-Φ24													
	Y132S-4/5.5	125	120	220	640	1000	1085	290	200	540	460	520	4-Φ19													

泵型号	配用电动机型号	L1	L2	L3	L4	L5	L	H1	H2	H	A	B	4-d	进液口法兰				出液口法兰								
														DN1	Φ11	Φ12	Φ13	n-Φ1	DN2	Φ21	Φ22	Φ23	n2-Φ2			
80-65-125	Y132S ₁ -2/5.5	100	75	160	600	870	987	212	112	372	350	390	4-Φ19													
	Y90S-4/1.1	100	15	100	600	850	900	212	112	372	350	390	4-Φ19													
80-65-160	Y160M ₁ -2/11	100	55	140	740	1000	1145	240	160	420	440	490	4-Φ19													
	Y90L-4/1.5	100	15	100	600	850	920	240	160	420	350	390	4-Φ19	80	132	160	200	8-Φ17.5								
80-50-200	Y160M ₂ -2/15	100	80	160	840	1170	1200	260	160	460	490	550	4-Φ19													
	Y100L ₁ -4/2.2	100	100	195	640	1050	950	245	160	445	470	525	4-Φ19													
80-50-250	Y200L ₁ -2/30	125	45	160	940	1240	1580	280	180	505	550	610	4-Φ24													
	Y112M-4/4	125	100	195	640	1050	1150	265	180	490	470	525	4-Φ24													
80-50-315	Y132M-4/7.5	125	90	210	780	1220	1350	315	225	595	540	610	4-Φ24													
	Y160M ₁ -2/11	100	55	140	740	1000	1145	240	160	420	440	490	4-Φ19													
100-80-125	Y90L-4/1.5	100	15	100	600	850	1000	240	160	420	350	390	4-Φ19													
	Y160M ₂ -2/15	100	80	160	840	1170	1373	260	160	460	490	550	4-Φ24													
100-80-160	Y100L ₂ -4/3	100	100	195	640	1050	1180	245	160	445	470	525	4-Φ24													
	Y200L ₁ -2/30	100	45	160	940	1240	1470	280	180	505	550	610	4-Φ24													
100-65-200	Y112M-4/4	100	100	195	640	1050	1180	265	180	490	470	525	4-Φ24													

泵型号	配用电动机型号	I.1	I.2	I.3	I.4	I.5	L	H1	H2	H	A	B	4-d	进液口法兰				出液口法兰							
														DN1	Φ11	Φ12	Φ13	n-Φ1	DN2	Φ21	Φ22	Φ23	n2-Φ2		
100-65-250	Y250M-2/55	125	45	160	940	1240	1500	300	200	525	550	610	4-Φ24												
	Y132S-4/5.5	125	100	195	640	1050	1180	285	200	535	470	525	4-Φ24	100	156	180	220	8-Φ17.5	65	118	145	185	4-Φ17.5		
100-65-315	Y160M-4/11	125	90	210	780	1220	1350	315	225	595	540	610	4-Φ24												
125-100-200	Y225M-2/45	125	45	160	940	1240	1605	325	200	605	550	610	4-Φ24												
	Y132M-4/7.5	125	100	175	640	1050	1400	285	200	565	470	525	4-Φ24												
125-100-250	Y280S-2/75	140	150	275	860	1350	1800	355	225	635	600	660	4-Φ24												
	Y160M-4/15	140	110	210	780	1220	1650	315	225	600	540	600	4-Φ24	125	184	210	250	8-Φ17.5	100	156	180	220	8-Φ17.5		
125-100-315	Y180M-4/18.5	140	90	210	780	1220	1600	340	250	655	540	600	4-Φ24												
125-100-400	Y200L-4/30	140	142	275	860	1350	1650	410	280	765	600	660	4-Φ24												
150-125-250	Y180M-4/18.5	140	110	210	780	1220	1600	340	250	700	540	600	4-Φ24												
150-125-315	Y200L-4/30	140	142	275	860	1350	1700	410	280	690	600	660	4-Φ24	150	211	240	285	8-Φ22	125	184	210	250	8-Φ17.5		
150-125-400	Y225M-4/45	140	142	275	860	1350	1750	445	315	845	600	660	4-Φ24												
200-150-250	Y225S-4/37	160	142	275	860	1350	1750	410	280	785	600	660	4-Φ24												
200-150-315	Y250M-4/55	160	190	335	1015	1560	2500	425	315	825	645	720	4-Φ24	200	266	295	340	12-Φ22	150	211	240	285	8-Φ22		
200-150-400	Y280M-4/90	160	170	310	1060	1660	2800	425	315	875	645	720	4-Φ24												

八、可能发生的故障原因及消除方法

故 障 现 象							
发生振动及杂音				密封腔泄漏过多			
消耗功率过大				轴封（包括填料函）发热			
流量扬程不足				泵过分发热或转不动			
泵输不出液体				轴承发热及容易损坏			
故障的可能因素							消 除 方 法
泵内或吸入管内留有空气	○	○		○			重新灌液、排除空气
吸上扬程过高或灌注不足	○	○		○			降低泵位、增加进口处压力
吸入管路过小或杂物堵塞	○	○		○			加大进入管径、清除堵塞物
吸入管浸入深度不够或漏气	○	○					增大浸入深度或检修管路
转速过高或过低	○	○	○				检查电动机转速,按要 求规定
泵转向不对	○	○					从电动机看应为顺时针转
装置扬程与泵扬程不符	○	○	○				设法降低吐出系统阻力或高度
介质重度与粘度与泵要求不符	○	○	○				重新核算或更换合适功率电机
在流量过小处运转产生振动				○	○	○	加大流量或设旁通循环管
泵与电机轴线不一致或轴弯曲				○	○	○	重新调整对中
转动部分与固定部分有磨擦				○	○	○	检修泵或改善使用工况
轴承磨损严重或损坏				○	○	○	更换新的
密封环磨损过多		○	○				更换新的
轴套、填料或动、静环磨损过多				○	○	○	更换新的
填料或机械密封选用或安装不当				○	○	○	按使用要求重配或安装
转动部分失去平衡引起振动				○	○	○	检查原因设法消除
悬架体油室油量过多或油过脏				○	○		按油位计加油或换新油
管路或泵内有杂物堵塞	○	○		○			认真检查及排污
双端面密封液压力不当					○	○	压力应比轴填充前大0.5-1.5kgf/cm ²
填料压盖过紧或过松				○	○		适当调整之

Possible cause of malfunction and elimination method

malfunction phenomenon									
Possible cause of malfunction	Vibration and noise occurred				Too much leakage in sealing cage				Elimination method
	Too much consumed power	Inadequate flow capacity, delivery lift	No liquid output		Shaft seal gets hot (including stuffing box)	Pump is excessively hot and hardly to rotate	Bearing gets hot, and apt to be damaged		
There's air left inside pump and suction piping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Reperfuse to remove air
Overhigh suction delivery lift or inadequate perfusion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Lower pump level, increase inlet pressure
Too small suction piping or existing obstruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Increase diameter of inlet piping to eliminate obstruction
Immersed depth of suction pipe is not enough or exists leakage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Increase immersed depth or overhaul piping
Rotating speed is too high or too slow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Check rotating speed of motor as stipulation
Incorrect rotating direction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Viewed from motor, rotate clockwise
Device lift is not in conformity with that of pump	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Try to reduce resistance or height of discharge system
Specific gravity of media is not in conformity with required by pump	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Recalculate or replace motor with suitable motor
Vibration occurred in place with small flow capacity				<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	Increase flow capacity or place bypass circulating piping
Motor axis is not aligned with pump, or shaft deformed			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Realignment
There's friction between rotating parts and fixed parts			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Overhaul pump or improve working condition
Bearing is severely worn or damaged			<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Replace
Too much wear of seal		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Replace
Sleeve, packing or dynamic and static ring are excessively worn			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Replace
Inappropriate packing or mechanical seal selected or improperly installed			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		Refit or install as required by usage
Rotating part is partially unbalanced, causing vibration			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Check the result and try to eliminate
Too much oil in suspension or it is too dirty			<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	Replenish or replace oil as oil level gauge
Piping or pump is clogged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Check carefully to discharge sewage
Hydraulic pressure of double-edge seal is inappropriate				<input type="radio"/>	<input type="radio"/>				Pressure shall be 0.5 ~ 1.5kgf/cm ² bigger than that before stuffing shaft
Stuffing gland is over tight or loose			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				Adjust appropriately

九、安装 Installation

A、泵的安装是否合理,对泵的正常运行和使用寿命有很重要的影响,所以安装前必须仔细校正,不得草率,泵的外型及安装尺寸,详见图一和表二。

B、必须保证泵在工作时不超过其允许汽蚀余量,泵的吸上高度(或倒灌高度)必须根据泵的汽蚀余量特性,管路阻力损失特性及高温水的吸入液面压力来确定。

泵吸上情况下使用时必须在吸入管路上装上底阀,并在出口管路上设置灌液螺孔和阀门,以供起动前灌泵使用。

泵倒灌使用情况下,应在吸入管路上装上阀门和过滤器,以免杂物进入。

C、吸入和吐出管路应该另设支架,不能用泵作支承。

D、安装泵的地点,应便于巡回检查和检修。

E、安装顺序

(a)将机组放在埋有地脚螺栓的基础上,在底座和基础之间放置成对的楔垫作找正之用。

(b)用水平仪分别放在泵轴或底座上,通过调整楔垫,找正机组的水平后,适当拧紧地脚螺栓,以防走动。

(c)用混凝土灌注底座和地脚螺栓孔。

(d)待混凝土干固后,应拧紧地脚螺栓,并重新检查泵轴的水平度。

(e)在接好管路及点动后确定电动机转动方向,再核对一遍轴的同轴度,联轴器的外圆上下,左右的差异不得超过 0.1mm,两联轴器端面在一周内最大和最小的间隙差不得超过 0.3mm。

(f)在机组实际运行 3-4 小时后作最后检查,如无不良现象,则认为安装合格。

(g)接上冷却水管。

A、Pump installation has a great influence on normal operation and service life, so it is compulsory to check pump carefully before installation. Pump outline and installation dimension see drawing 1 and drawing 2.

B、Assure not to exceed permissible NPSH during operation, suction height shall be decided by NPSH character, piping resistance loss and suction pressure of hi-temperature water.

It is obligated to install bottom valve and connect cooling water in suction pipeline under suction circumstance. set liquid filling hole and valve on outlet piping for perfusing before start and stop pump.

Under the circumstance of down draft, equip valve and filter on suction piping to prevent foreign material entering.

C、There should be additional support for suction and discharge piping, pump can't be used as support.

D、Installation place shall be accessible to check and maintain.

E、Installation sequence

(a)Place pump unit on foundation buried with anchor bolt.

(b)Check the level of pump shaft and base, adjust by spacer, tighten anchor bolt after leveling.

- (c) Grout foundation and anchor bolt hole.
- (d) Tighten anchor bolt after concrete dry, recheck level of pump shaft.
- (e) After connecting piping, check rotating direction by inching, recheck concentricity of shaft, less than 0.1 mm, the difference of max. and min. clearance of both couplings can't exceed 0.3mm.
- (f) Perform final inspection after actual operation for 3 - 4hs, acceptable if no abnormal discovered.
- (g) Pressure of cooling water isn't suitable too big.

十、起动、运行、停止和拆卸 Start, running, stop and dismantlement

A、起动前准备:

- (a) 起动前要把泵和现场清理干净,并先启动冷却水。冷却水压力不宜太大,只要确保有水流流动就行。
- (b) 在托架内加入适量 L-AN46 号机械油(加油到油镜的中心位置)。
- (c) 未接联轴器前检查电动机的转向,与泵的转向箭头一致后,接好联轴器。
- (d) 用手转动泵轴,应无碰擦现象。
- (e) 泵在吸上情况下使用,起动前应灌泵或抽真空;泵在倒灌情况下使用,起动前应用所输送液体将泵灌满,驱除泵中的空气后,将吐出管的阀门关闭。
- (f) 起动前检查基础螺栓有无松动。压盖是否歪斜,以及润滑油和冷却水的供应情况。

B、起动

(a) 关闭出口压力(或真空)表和出水阀门、(如有旁通管,此时也应关闭)。起动电机。(最好先点动、确认泵转向正确后,才开始正式运行)。然后打开出口压力(或真空)表,当泵达到正常转速,且仪表指出相应压力时,再慢慢打开出水阀门,调节到需要的工况。在吐出管路关闭的情况下,泵连续工作的时间,不能超过 3 分钟。

(b) 起动过程中要时时注意电动机的功率读数及泵的振动情况,振动数不应超过 0.06 毫米,测定部位是轴承座。

(c) 密封情况:开机前应加上密封冷却水。机械密封应无泄漏、发热现象。

C、运行

(a) 经常检查泵和电机的发热情况(轴承的温升不应超过 75℃)及油位计供油情况。(一般每运行 1500 小时后,要全部更换润滑油一次)。

(b) 不能用吸入阀来调节流量,避免产生汽蚀。

(c) 泵不宜在低于 30% 设计流量下连续运转,如果必须在该条件下连续运转,则应在出口处安装旁通管,排放多余的流量。

(d) 注意泵运转有无杂音,如出现异常状态时,应及时停车检查。

E、停止

(a) 缓慢关闭吐出管路闸阀(如果泵在倒灌情况下使用,还要关闭吸入管路的闸阀)、并关闭各种仪表的开关。

(b) 切断电源。

(c) 关闭冷却水。

(d)如果环境温度低于液体凝固点时,要放净泵内的液体,切防冻裂。

(e)如果长时间停车不用,除将泵内的腐蚀性液体放净外,各零部件应拆卸清洗干净尤其是密封腔。最好是将泵拆下清洗后重新装好,除涂油防锈处理和封闭泵进、出口外,还应定期检查。

F、拆卸

当泵出现意外情况需要检修时,应按顺序进行拆卸。

(a)拆开托架上的放油螺钉,放净托架内的存油。

(b)拆开泵体与托架的联接螺栓,取下泵体。

(c)左旋拧下叶轮螺母,然后再取出叶轮。

(d)将泵盖连同轴套,机械密封等从轴上取下。

(e)拧下密封压盖上的螺栓,取下密封压盖及机械密封动环和轴套。

(f)将泵盖与密封箱联接的螺栓拧下,取出静环。

(g)将托架两端的轴承压盖螺栓拧下取出轴承压盖和轴。

(h)取下轴和轴承。(如在拆卸过程中遇到问题,请与我公司联系:0523-84313669)

A、Preparation before start:

(a)Clean pump and site before start, open cooling water.

(b)Check if there's enough lubricant in bracket.

(c)Before connecting coupling, check whether motor rotating direction is in conformity with pump.

(d)Rotate pump shaft manually without any friction.

(e) Operate under suction, perfuse or vacuum pump before start; operate under back flow, perfuse pump with liquid conveyed, then close valve of discharge piping after removing air.

(f) Before start, check whether foundation bolt loose, gland inclined, as well as the supply of lubricant and cooling water.

B、Start

(a)Close inlet and outlet pressure (vacuum) gauge and outlet valve, then start motor, open inlet and outlet pressure (vacuum) gauge. Gauge will indicate corresponding pressure as pump reaching normal rotating speed. Then open outlet valve slowly, adjust to working condition required. Pump can't operate continuously over 3min.

(b)Pay attention to motor power reading and pump vibration during starting, the vibration measured in bearing shall not exceed 0.06mm.

(c)Sealing:Apply cooling water before start, mechanical seal shall be free from leakage and heat.

C、Running

(a) Regularly check the temperature of pump and motor (no more than 75℃), and oil level gauge (replace lubricant every 1500hs).

(b)Don't adjust flow capacity via suction valve to avoid cavitation incurred.

(c)The pump can't continuously operate under 30% of designed flow capacity, if required, install

bypass piping to emit surplus flow capacity.

(d) Check whether there's noise during operation, stop immediately if abnormal discovered.

E、Stop

(a) Close gate valve of discharge piping (under down draft, close gate valve of suction piping) and all instruments.

(b) Disconnect power

(c) Close cooling water

(d) Empty liquid inside body as ambient temperature lower than freezing point, to avoid frost crack.

(e) For long term stop, in addition to emptying corrosive liquid inside pump body, all components shall be disassembled and cleaned, especially sealing cage, the pump shall be applied rust preventive oil, its inlet and outlet shall be sealed.

F、Dismantle

Dismantlement sequence shall be as follows as overhaul required.

(a) Remove bleeder screw in bracket to empty oil.

(b) Disconnect joint bolt of pump body and bracket to take off pump body.

(c) Revolve leftwards impeller nut to take off impeller.

(d) Remove pump cover together with sleeve, mechanical seal from shaft.

(e) Take off bolt of seal gland to remove seal gland, dynamic ring of mechanical seal and sleeve.

(f) Take off bolt of pump cover and sealing case to remove static ring.

(g) Take off bolt of bearing gland of both sides to get bearing gland and shaft.

(h) Take off shaft and bearing. (If encounter any problem during disassembly, please contact our company: 0523 - 84313669)

十一、使用机械密封注意事项 Notice for mechanical seal

本型号泵可根据不同的使用条件安装不同形式的机械密封。根据所选用密封型式不同,其使用方法和注意事项应有所不同,具体情况请参阅机械密封安装使用说明书、GB3215-82“炼厂、化工及石油工艺流程用离心泵通用技术条件”,下面提供几点一般应注意的事项:

A、由于机械密封配套出厂时适用于悬浮颗粒的介质中使用,因此,使用时请加注冷却水。

B、拆卸机械密封应仔细,不许用手锤、铁器等敲击,以免破坏动、静环密封面。

C、如果有污垢拆不下来时,应设法清除污垢,冲洗干净后再进行拆卸,以免损坏密封元件。

D、安装机械密封前,应检查所有密封元件是否失效或损坏,如有则应重新修复或更换。

E、应严格检查动环与静环的相对磨擦密封面,不允许有任何细微的划痕,碰伤等缺陷,所有另部件包括泵体、叶轮、密封腔等在装配前均应冲洗干净,尤其是动、静环端面,要用清洁、柔软的布或棉纱认真擦拭干净,然后涂上一层清洁的油脂或机油。

F、装配中要注意消除偏差,紧固螺钉时,要均匀拧紧,避免发生偏斜,使密封失效。

G、正确调整弹簧的压缩量,泵安装好以后,以手扳动转子时,应感觉到密封弹簧既有一定的压缩量,而又能轻快、灵活地转动没有咬紧的感觉。如感觉太紧或盘不动,则应适当调松一

些。

H、起动前应先开启冲洗液,使密封腔内充满密封液。停车时,先停泵,后关密封冲洗液。

Different mechanical seals can be used for this type pump varied with different working condition. On the strength of different mechanical seal selected, detail usage method and notice refer to Installation Manual of Mechanical Seal, GB3215 - 82 General Technical Condition of centrifugal pump for chemical process of refinery, chemical industry, petrochemical industry, general notice is as follows.

A、As mechanical seal is applicable to media with suspension, apply cooling water when use.

B、Dismantle mechanical seal carefully, free from any hammer, ironware to avoid damage to seal face of dynamic and static ring.

C、Don't reluctantly dismantle if dirt hardly to take off, try to clean, then disassemble, so as to avoid damage to sealing elements.

D、Check all sealing elements if there's any damage, repair or replace before installing mechanical seal.

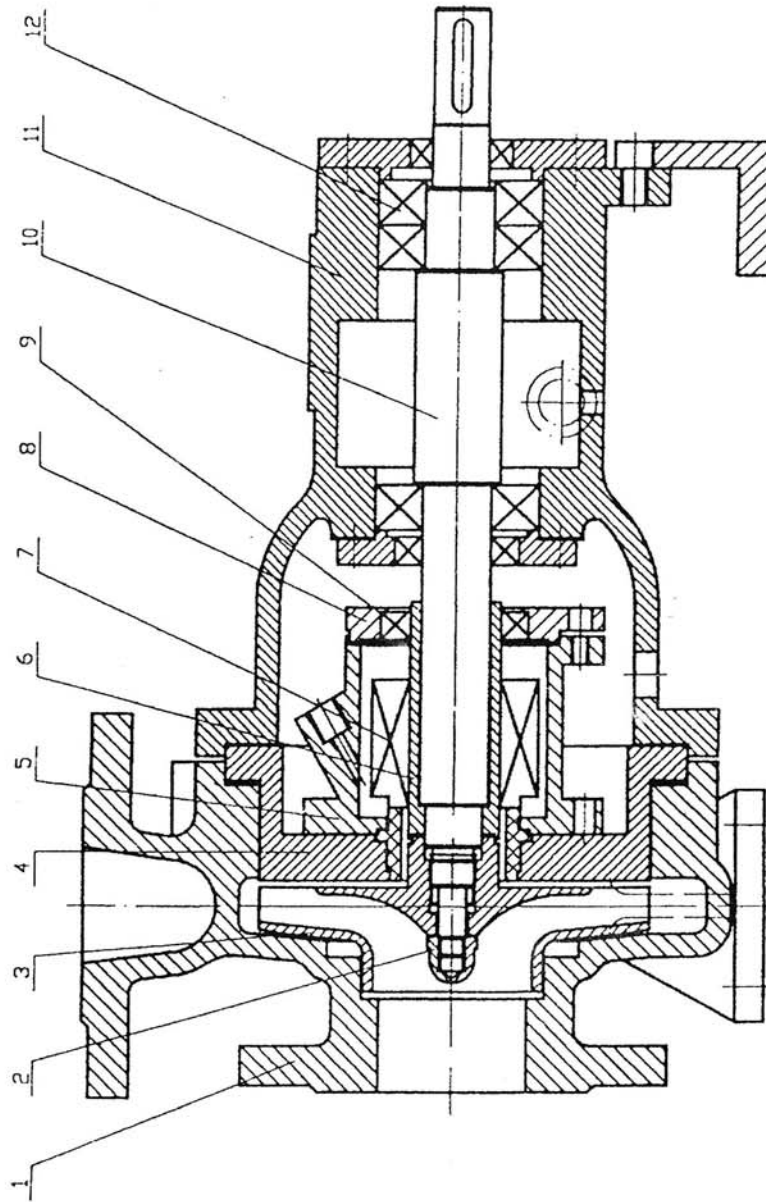
E、Check sealing surface between dynamic seal and static seal carefully, any slim scratch or damage is not allowed. All parts including pump body, impeller, seal chamber shall be cleaned before installation, especially dynamic and static seal ring surface, should apply grease or machine oil after clean.

F、Eliminate deviation during installation, screw shall be tightened uniformly to avoid deflection and seal invalid.

G、Correctly adjust amount of spring compression, turn the pump manually after installation, it shall rotate smoothly, the seal spring should have certain amount of compression. Make suitable adjustment if too tight or too loose.

H、Before start, open seal flush liquid to perfuse seal chamber; close seal flush liquid after stop pump.

十二、结构图 Configuration



- 1、泵体 2、叶轮螺母 3、叶轮 4、泵盖 5、密封箱 6、轴套 7、机械密封
 8、密封压盖 9、骨架油封 10、轴 11、托架 12、轴承
- 1、Casing 2、Impeller nut 3、Impeller 4、Pump cover 5、Sealing box 6、Sleeve
 7、Mechanical seal 8、Seal gland 9、skeleton oil seal 10、Shaft 11、Bracket 12、Bearing



江苏精伦泵业制造有限公司

JIANGSU JINGLUN PUMP MANUFACTURING CO., LTD

地址：江苏省靖江市新桥镇工业园区88号

电话：0523-84266065