

中国电器工业协会工业锅炉分会会员企业
“重质量、守诚信”优秀企业
AAA级资信等级企业

常州市名牌产品
实用新型专利产品



注册商标

锅炉炉排减速器

BOILER FIRE GRATE SPEED REDUCER

GL-P型 锅炉炉排减速器



中国·江苏
溧阳市苏南机械有限公司
CHINA JIANGSU LIYANG SUNAN MACHINERY CO.,LTD.
(原江苏省溧阳市机械厂)
ORIGINAL JIANGSU PROVINCE LIYANG CITY MACHINERY FACTORY

企业荣誉

信誉是企业生命的延续，品质是企业目标，在享受荣耀与喜悦时，
我们怀着更远的抱负与理想，追求更高的目标，
开创更壮美的未来。

Credit is the continuation of life, quality is the enterprise's goals, enjoy
the glory and joy when we are following with its vision and ideals, the pursuit
of higher goals, to create a more magnificent future



先进的数控设备 现代化的企业管理

Advanced CNC equipment, Modern management



企业概况

溧阳市苏南机械有限公司(原江苏省溧阳市机械厂)创建于1969年,是从事3K结构行星减速器的研制与生产、铸造、锻造、容器制作等为主的股份制企业,是锅炉炉排减速器、再生胶脱硫机制造商。公司通过了ISO9001:2000国际质量标准体系认证,证书号为:EWC5802Q.C56。

GL-P型系列锅炉炉排减速器是我厂与江苏无锡703研究所、原机械工业部第四设计研究院等科研单位共同研制开发的一种新颖锅炉炉排驱动装置,于1991年通过省级鉴定,且为国家专利产品,专利号为94226998.5,九五年五月被评为国家级新产品。

该系列产品采用3K结构渐开线齿轮行星传动及浮动均载机构,具有功率分流等特点。产品配用电磁调速电机控制器(根据用户需要还可以配用变频电机及变频器等)进行平滑无级调速,调速范围广,使用方便,性能稳定可靠,并装有可靠的过载保护机构。

该系列减速器采用了优化设计,结构先进、紧凑、体积小、重量轻、效率高、寿命长、噪声低、易维修,是一种新型、理想的锅炉节能辅机。目前已与全国一百多家锅炉生产厂配套使用,且远销东南亚地区,是国内首批指定出口单位之一。

LY-20、LY-60型再生胶快速脱硫机是我公司应用范围广泛的产品。它具有投资少,收效快,质量好和节能等优点。

该机应用之再生胶快速脱硫新工艺是目前世界先进生产工艺之一。该新工艺我国于1977年首先在上海橡胶厂研制成功,并获化工部科技成果奖。

该机适用于轮胎类、丁腈胶、胶鞋类等再生胶脱硫、生产活性胶粉、水乳型沥青——再生胶防水涂料的生产。它不需要用锅炉蒸汽,利用高速搅拌自动升温达到脱硫效果,特别适用于中、小型工厂,以及能源紧张之地区,颇受全国各使用单位之欢迎,畅销全国和东南亚有关国家。





Introduction to the enterprise

Liyang Sunan machinery Co.,Ltd. (the former Liyang machinery plant) was established in 1969, who has engaged in the development and production of 3K structure planetary speed reducer, installation and alteration of boiler, tank making for many years. At present, We are the manufacturer of GL-P type Fire Grate Speed Reducer of boiler, Rubber Desulphurizing Machine. Sunan Machinery company has been ISO 9001:2000 certified. The certificate number is EWC5802Q.C56.

The series of fire grate speed reducer of boiler of GL-P is a novel fire grate driving device Co-developed by our company and other research institutions including the 703 Institution in Wuxi, Jiangsu Province, and the 4th Design and Research Institution of the former Machinery Industry Ministry, etc. This series has passed the examination of provincial government since 1991, meanwhile the GL-P series is a national patent product and the patent No. is 94226998.5. And in May, 1995, it was awarded as a new national product.

The products of such series adopt the Planetary involute gear drive of 3K structure and fluctuating load balancing mechanism with the feature of Power-split. And they can be equipped with electromagnetic Speed Motor Controller, converter motor and inverter alternatively according to customers' requirement to make speed adjustment smoothly within a wide range. The suite of our device has a stable and reliable performance and is ease of use, moreover, there's also a system of reliable overload protection.

The GL-P reducer adopted the international optimized design with advanced structure, compact, small size and light weight, and has the advantage of high efficiency, long life, low noise and ease of maintenance. Therefore, it's a new and ideal energy-saving auxiliary machine of the boiler. At present, the GL-P reducers has equipped with the boilers manufactured by more than 100 boiler plants in China, and has exported to Southeast Asia. Our company is one of the first appointed companies to export the GL-P reducers.

The LY - 20、LY-60 High Speed Rubber Desulphurizing Machine is an advanced machine with many uses. It is characterized by small investment, quick returns, high productivity, high quality and ability to save energy.

High speed rubber desulphurizing process, used by the machine, is one of present advanced technological processes in the world. In 1977, this new process was first in China developed by Shanghai Rubber Factory and won the prize of Ministry of Chemical Industry for achievements in science and technology.

The machine is suitable for desulphurizing rubber of waste types, waste rubber boots, butyronitrile rubber and so on. and for production of emulsified water proof coating by reproducing rubber and asphalt, producing desulphurizing effect by high speed moving rubber to automatically raise temperature without need for boiler steam. It is especially suitable for medium and small factories, and for areas where energy is in short supply. The LY - 20 LY-60 machines are well received by customers in China, and sell well in China and South-east Asia.



溧阳市苏南机械有限公司

CHINA JIANGSU LIYANG SUNAN MACHINERY CO.,LTD.

质量是企业的生命

以一流品质获取市场信任;
以优质服务赢得客户满意;
以持续改进寻求企业发展;
以卓越管理树立企业品牌!



成品区



调速机



脱硫机



半成品区

至今为止，从今开始，
我们会持之以恒地专注于产品的设计与加工，
装配等每一个细节，预防不合格的缺陷，
意在追求和创造最完美的产品。
一切为了满足您的需要，我们会根据客户的需求，
对产品进行重新定做和设计
直到达到您的理想要求。

诚信，苏南立业之本
 创新，苏南发展之源
 精品，苏南强大之基



GL-P型
 锅炉炉排减速器

设备零部件 Equipment unit



行星总成



行星齿轮



行星架



行星轮轴



中心轴齿轮



内齿轮
 主轴
 (输出轴)



内齿轮



主轴



内齿圈



A齿轮



C齿轮



B(D) 齿轮



箱体



前盖



皮带盘总装



皮带盘外圈



皮带盘内圈



保险装置



保险套



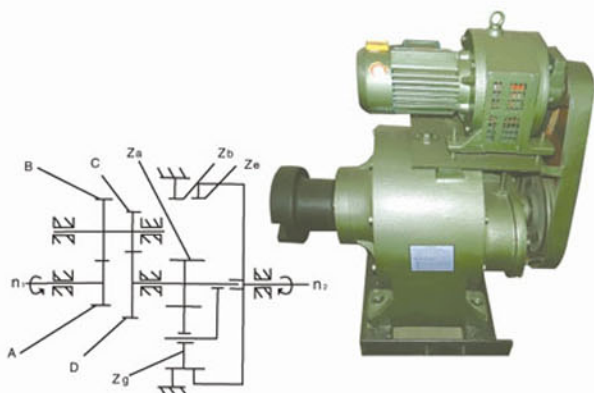
保险销

传动原理图

Transmission Schematic

如图一所示, 交换齿轮A、B、C、D组成二级平行轴传动, 齿轮Za、Zb、Zg、Ze组成3K结构行星齿轮传动。

As shown in Figure1,two-stage parallel axis consist of change gear A,B,C,D Gear Za,Zb,Zg,Ze consist of 3K structure planetary gearing.



图一
(figure 1)

主要技术参数

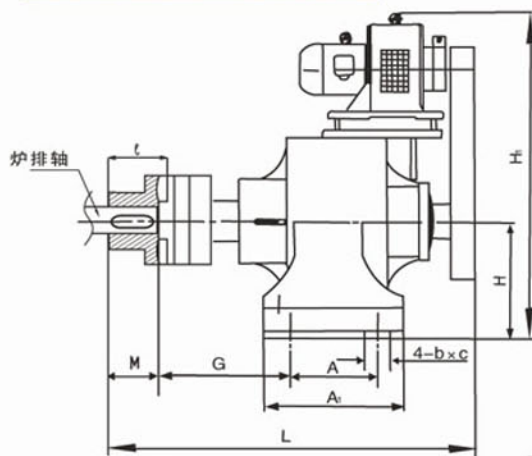
Main technical parameters

锅炉炉排减速机型号 Speed reducer type		GL-5P	GL-5PA	GL-10P	GL-16P	GL-20P	GL-30P	GL-40P	GL-50P	GL-60P	GL-80P	GL-100P	GL-120P
总减速比 Total reduction gear ratio		5278	7357	7888	7888	5682	5415.5	8037	7748.6	8037	6810	6810	6800
输出轴转速范围(r/min) Output shaft revolving speed scope		0.02368 ~0.2368	0.01631 ~0.1631	0.01585 ~0.1585	0.01585 ~0.1585	0.0220 ~0.220	0.02308 ~0.2308	0.01555 ~0.1555	0.01613 ~0.1613	0.01555 ~0.1555	0.01836 ~0.1836	0.01836 ~0.1836	0.01838 ~0.1838
额定输出扭矩 Output shaft torque(N·m)		5000	5500	7500	11000	20000	30000	45000	55000	60000	75000	100000	120000
匹配锅炉吨位(t/h)参考 Match boiler tonnage(t/h)Reference		1~2(4)	4(特殊锅炉)	5~6	8~10	10(重型炉排),15~20	20(重型炉排),25	30~40	45~50	55~60	65~80	85~100	105~120
电 机 配 置 参 考 值 Electromagnetic regulated speed motor	型号 Type	YCT90-4B或 YCT112-4A	YCT112-4A	YCT112-4B	YCT132-4A	YCT132-4B	YCT160-4A	YCT160-4B	YCT160-4B	YCT180-4A	YCT200-4A	YCT200-4B	YCT200-4B
	功率(kw) Power	0.37或0.55	0.55	0.75	1.1	1.5	2.2	3	3	4	5.5	7.5	7.5
	转速(r/min) Revolving Speed	125~1250(无级) (电机最佳转速: 500~1200) 125~1250(Non-class) (Best revolving speed:500~1200)											

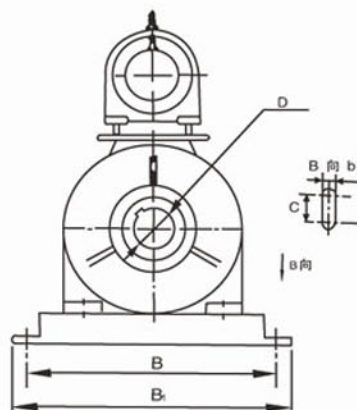


外形安装尺寸

Outline installation dimensions



图表二 (chart 2)



图二 (figure 2)

单位(Unit): mm

锅炉炉排减速器型号 Speed reducer type	H	A × B	A1 × B1	H1	G	L	t	M	底脚螺栓孔 4-b × c	D	匹配锅炉(t/h) Match boiler tonnage
GL-5P	190	150 × 420	270 × 460	610	288	725	110	85	4-20 × 70	According to the demand of the customer certain	1-2(4)
GL-5PA	220	200 × 490	320 × 530	630	294	810	110	85	4-20 × 70		4(特殊锅炉)
GL-10P	250	270 × 600	400 × 650	700	366	1061	185	150	4-22 × 70		5-6
GL-16P	380	300 × 870	500 × 950	1000	393	1093	185	150	4-26 × 70		8-10
GL-20P	380	300 × 870	500 × 950	1000	475	1175	185	150	4-26 × 70		10(重型炉排), 15-20
GL-30P	435	300 × 920	550 × 1000	1250	477	1315	185	150	4-26 × 100		20(重型炉排), 25
GL-40P	470	400 × 1060	700 × 1200	1345	617	1615	275	230	4-32 × 100		30-40
GL-50P	470	400 × 1060	600 × 1200	1345	617	1615	275	230	4-32 × 100		45-50
GL-60P	480	400 × 1060	620 × 1220	1355	617	1615	275	230	4-32 × 100		55-60
GL-80P	550	425 × 1110	625 × 1250	1555	633	1790	290	245	4-32 × 120		65-80
GL-100P	620	460 × 1250	725 × 1370	1820	682	1850	290	245	4-32 × 120		85-100
GL-120P	630	460 × 1250	730 × 1380	1830	682	1870	290	245	4-32 × 120		105-120

注:

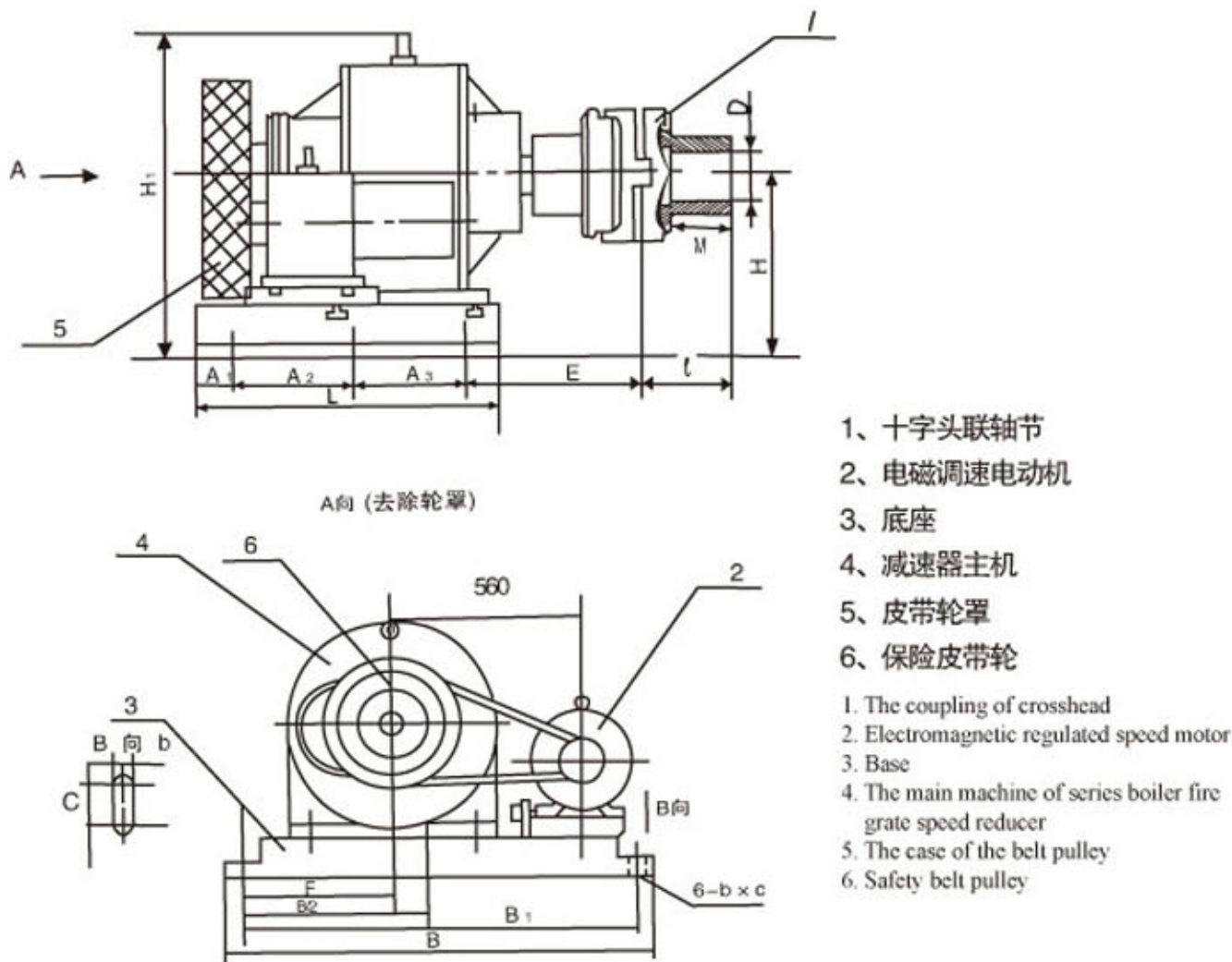
- 1、以上安装尺寸仅作参考,可以根据用户需要而定。
- 2、安装时应调整减速器本机至底座面板长孔的初始位置。

Remarks:

- 1、Installation dimensions as is indicated above for reference only. Can be custom ordered
- 2、Initial position from the machine to the slot of base face-plate should be adjusted.

特殊外形及安装尺寸

Special appearance and installation dimension



图三 (figure 3)

图表三 (chart 3)

														单位(Unit): mm	
锅炉炉排减速机型号 Speed reducer type	H	H1	L	B	E	ℓ	M	A1	A2	A3	B1	F	底座螺栓孔6-b×c	D	匹配锅炉(t/h) Match boiler tonnage
GL-16P/I	400	680	710	1170	366	185	150	90	265	265	1100	400	6-22×70	根据用户 需要而定 According to the demand of the custo- mer certain	8-10
GL-20P/I	435	898	800	1272	400	185	150	90	310	310	1172	405	6-22×100		10(重型炉排) 15-20

- 注:
- 1、以上安装尺寸仅作参考,可以根据用户需要而定。
 - 2、安装时应调整减速器本机至底座面板长孔的初始位置。

Remarks:

- 1、 Installation dimensions as is indicated above for reference only,Can be custom ordered
- 2、 Initial position from the machine to the slot of base face-plate should be adjusted.

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创新-苏南发展之源

精品-苏南强大之基



GL-P型
锅炉炉排减速器

国内部分使用单位

Some domestic use of units of

江阴三房巷化纤集团使用我公司产品GL-40P 17台



内蒙古富泰热力有限公司使用我公司产品GL-100P 2台



北京观音寺供热站使用我公司产品GL-100P 5台



过载保护系统

Overload Protection System

GL-P型系列锅炉炉排减速器大皮带轮部位采用销钉安全离合器，见图四，外圈1由皮带带动，内圈2由平键与减速器的输入轴相连接，内外圈间设置保险销连接，能有效保证输出轴在发生超载故障时切断保险销，使减速器与炉排停止运转；另外，减速器经长期运行后，保险销疲劳折断，必须更换保险销。

The location of the big belt pulley of GL-P series fire grate speed reducer adopt Stiff overload clutch,As shown in Figure 4, Outer Circle 1 drove by belt,and Inner Circle 2 connected by flat key and input axis of the speed reducer.Safety pin that connect outer circle to inner circle can be cut off when overload trouble occurred so as to stop the speed reducer and the fire grate.Besides,Safety pin should replace at regular intervals.

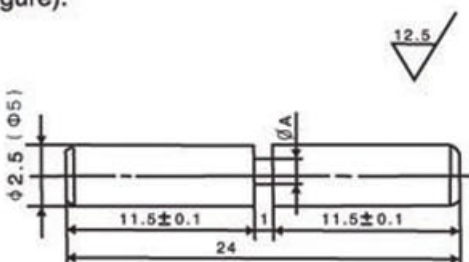
警告：保险销专用，绝不可替代！！

Warning: Safety pin dedicated,Non-Substitutable!!

保险销附图及规格尺寸表
(Figure and size of safety pin)

减速器型号 Speed reducer type	保险销规格尺寸 ϕA Size	
GL-5P型		$\phi 0.8$
GL-5PA型		
GL-10P型		$\phi 1.0$
GL-16P型		$\phi 1.2$
GL-20P型	15t/h	$\phi 1.5$
	20t/h	$\phi 1.8$
GL-30P型		$\phi 2.0$
GL-40P型		$\phi 2.2$
GL-50P型		$\phi 2.2$
GL-60P型		$\phi 2.2$
GL-80P型		$\phi 2.4$
GL-100P型		$\phi 2.4$
GL-120P型		$\phi 2.4$

附图(Figure):



注：80P、100P、120P为 $\phi 5$

名称：保险销
材料：H08MnA



更换保险销程序：

- 1、关掉电源。
- 2、松开螺钉，拨开压板。
- 3、取出保险套和断销，检查内、外圈是否相对旋转灵活。
- 4、将已装进新保险销的保险套，装入已对齐的外圈1与内圈2的保险孔内。
- 5、用螺钉压紧压板，即可启动电机。

注意：在换上新销之前，先分析查明造成保险销断裂的原因，且排除故障。

本装置的保险销已经过厂内验证试验，确保减速器超载时可靠地切断保险销。切不可随意用钉、铁丝等代替保险销，以免造成不必要的损失。我厂随机配备若干根保险销。

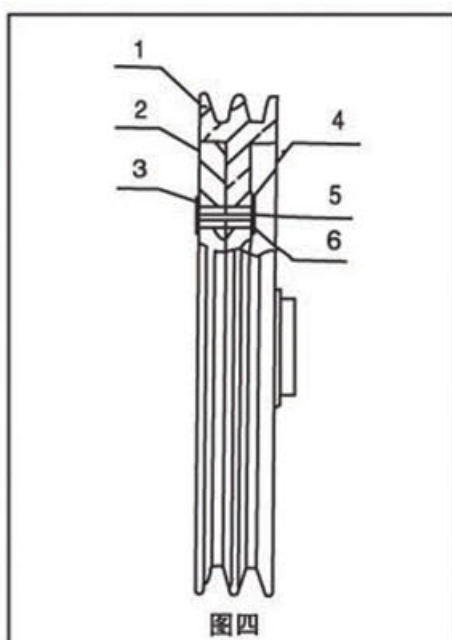
Procedure of changing safety pin

- 1 .Turn off the power.
- 2 .Loosen the screw and move away the plate.
- 3 .Take out the safety cover and broken pin ,check up the agility of outer ring1 and inner ring.
- 4 .change the safety pin and aim the safety boles of the outer and inner cycles and out in a new safety pin.
- 5 .Put the gland on its position.Tighten the screw and then start-up power.

NOTE:

First,find out the cause of the trouble before replace the broken safety pin.

All our safety pin have been tested and verified to ensure the normal operation.It is not able to substitute iron wire and nail for safety pin wantonlg, avoid resulting in oriose loss.We provide with the some safety pin along with the machine.



图四

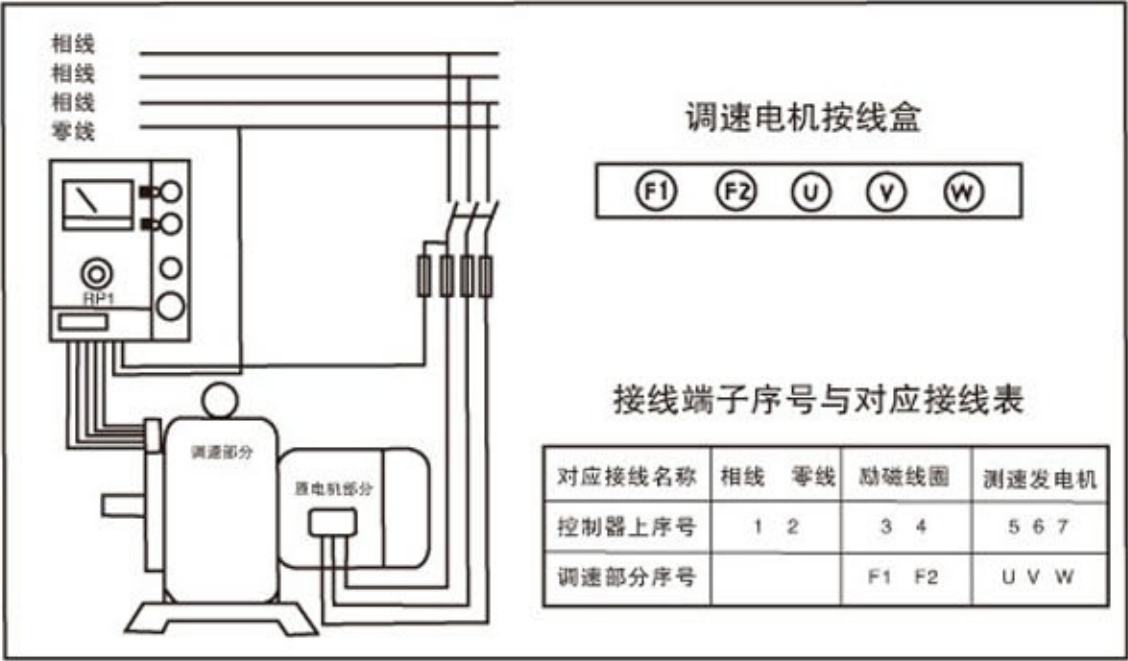
- | | |
|-------|--------------|
| 1、外圈 | 1.outer ring |
| 2、内圈 | 2.inner ring |
| 3、压板1 | 3.Plate 1 |
| 4、压板2 | 4.Plate 2 |
| 5、销套 | 5.pin sets |
| 6、安全销 | 6.safety pin |

电机控制线路

Motor Control Circuit

JD1A-40调速控制器与调速电机连接简图

JD1A-40 speed controller and variable-speed motor connected tube map



控制器面板嵌入式安装开孔尺寸：宽X长132X192 4-φ6
Embedded controller panel installation hole size: width X length 132X192 4-φ6

注意：
为保证调速控制器和调速电机安全正常工作，控制器上的1号相线须由拖动电机的交流接触器控制，当拖动电机停机时不因调速器单独通电而损坏励磁线圈。

Note:
For the sake of the safety, 1 number phase line demand motor of alternating current, AC contact machine of control, can't be the motor shut down controller switch on electricity alone but damage the solenoid.

- 操作程序：
- 1、开机前先检查控制器开关（K）应处于"断开"状态，主令电位器应旋至零位。开机时，先闭合炉排电机的接触器，然后闭合控制器上的控制开关（K），再缓慢旋转主令电位器至你所需要的转速。
 - 2、关机：先将主令电位器旋至零位，然后断开控制器上的控制开关（K），过2-3分钟后 再断开炉排电机的接触器。
 - 3、为了防止电子信号干扰（如变频器、电动车充电器等），造成控制器表针摆动大或失控，建议用户安装时连接线采用屏蔽线连接或隔离。

- Procedures:
- 1.boot before checking controllers switch (K) should be in the "off" state, the main so that potentiometer to zero have to be rotating. Boot, the first motor contactor closed grate, and then closed control switch on the controller (K), then a slow rotation Master potentiometer to the speed you need.
 - 2.shut down: First Master Rotary potentiometer to zero bit, and then disconnect the controller of the control switch (K), over 2-3 minutes and then disconnect the motor contactor grate.
 - 3.We suggested that customs adopt shielding wire to connect or insulate when installation in order to prevent signal interference,such as inverter,charger of electric car and so on, and it would not cause the controller out of control.

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精品-苏南强大之基



GL-P型
锅炉炉排减速器

使用与保养

Operation and Maintenance

- 1、本装置投入运行前，应检查安装质量，注润滑油至减速器油位观察孔的中心位置。
- 2、减速器在冬季时推荐使用N32润滑油，夏季时推荐使用N46润滑油，加油至油标中心高度。
- 3、在十字头联轴节内充填钙钠基润滑脂。
- 4、在运行前调节好皮带的张紧度，大小皮带轮端面错位控制在1mm以内，用手转动皮带轮，应能平滑转动无卡死现象。
- 5、减速器安装使用一个月后，进行第一次换油，以后每三个月更换一次润滑油，并定期检查油面高度。发现漏油应及时排除，如更换密封圈等。

- 1.Before the reducer is put into operation check on the quality of installation and oiling according to the graduation on the looking hole of the reducer.
- 2.It's best to use the N32 gear oil in winter and use the N46 in summer .
- 3.Fill the calcium grease into the coupling of crosshead.
- 4.The tension of belt should be rationally adjusted and the deviation of the big and small bell-wheel should less than 1 mm. Before setting the machine going, spin the belt-wheel manually to be sure that it's smooth.
- 5.The speed reducer is used for three months hereafter, the progress first time changes the oil. Change the grease of the reducer every half year and check regularly on the grease level so as to replenish in time. It there is leakage of the grease, change the sealing washer right away.

意见反馈

Feedback


如果您对“溧阳市苏南机械有限公司”有任何的意见或建议，请及时反馈给我们，我们将在第一时间竭尽所能为您真诚地服务，同时感谢您对苏南机械有限公司的支持和厚爱，我们相信，只有物美价廉的产品回报客户，才能实现最终的“互利”和“双赢”。

If you have any suggestions about Liyang Sunan Machinery Co.,LTD, please contact us! We will serve you timely and sincerely! Thank you for your support and loving. We believe we can only achieve mutual benefits and win-win by returning value to customers.

苏南机械有限公司郑重声明


尊敬的客户：

您好！

为了保护您的合法权益，免除您的后顾之忧，在订购本公司产品时，请认准本公司  防伪商标，谨防假冒！

Sunan Machinery Co., Ltd. Solemnly declare Dear Customer:

Hello!

To help protect your legal rights and interests, eliminate your worry about ordering our products, please verify the brand as  .Beware of imitations!

苏南-机械
SUNAN MACHINERY



地址：江苏省溧阳市平陵东路79号
 Add: No.79 Pingling Eastern Road Liyang
 City,Jiangsu Province · China
 电话(Tel): 0519-87222014 87291146
 87385518 87385599
 热线(Tel): 13961286098
 传真(Fax): 0519-87200562 87223504
 邮编(Post Code): 213300
<http://www.lyjxc.com>
 E-mail:jishu@lyjxc.com

