

序 言

preface

“嘉利捷”牌柴油发电机组（以下简称机组）的用户已遍布全国各地，为各行各业提供着高效，安全、可靠的电源。经过多年的经验积累“嘉利捷”品牌已成为性能一流，安全可靠、使用寿命长的象征。“嘉利捷”牌机组将会做的更好，满足你的要求。

"Jialijie" brand diesel generating units (hereinafter referred to as the unit) the user has spread all over the country, from all walks of life to provide a highly efficient, safe, reliable power supply. After many years of experience accumulation "Shoop" brand has become a first-class performance, safe and reliable, use long life symbol. "Jialijie" licensing unit will do better meet your requirements.

为了使机组安全工作，发挥出更好的效率，请您在开始使用机组前，先认真阅读这本使用说明书。

In order to make the unit safety work, to play a better efficiency, please before starting to use the unit, read the instruction manual carefully.

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安全注意事项

Safety precautions

1. 机组应安装在通风干燥、洁净的室内。严禁安装在有水蒸气、灰尘、可燃性气体，腐蚀性气体较多的地方。

1, the unit should be installed in the ventilation and dry, clean room is strictly prohibited in the installation of water vapor, dust, flammable gas, corrosive gas more places.

1、柴油机的排气管应加管接到室外，防止排出废气污染室内环境，影响操作人员身体健康，确保柴油机功率正常。

2. The exhaust pipe of the diesel engine should be added to the outside, to prevent the waste gas from polluting the indoor environment, and to influence the operation personnel to be healthy, to ensure the normal power of the diesel engine.

3、机组安装好后，必须给所有转动部件和高温部件装上保护装置，防止宽松的衣服，头发、手指或坠落的工具可能会缠住转动部件而造成人身伤害。

3. Unit is installed, you must give all rotating parts and high temperature components are installed on protection device, prevent loose clothes, hair, fingers or falling tools may be haunted the rotating parts and cause personal injury

4、机组加油时应关闭发动机。禁止吸烟和火种，防止起火和爆炸。

4. The unit should turn off the engine when refueling. It is prohibited to smoke and fire, to prevent fire and explosion.

5、柴油机用的燃油和机油应按柴油机说明书的规定。严禁使用牌号不合适的燃油和机油或劣质燃油和机油。

5. Diesel engine fuel and oil shall be in accordance with the specification of the diesel engine.

6. 启动机组之前，应认真检查冷却液和机油的装载情况，确保冷却液和机油容

量符合要求。

6、Before starting the unit, should carefully check the coolant and oil loading situation, to ensure that the coolant and oil capacity to meet the requirements.

7、机组运行中应经常检查是否有漏水、漏油、漏气等现象，并及时给予调整。

7.Unit operation should always check whether there is leakage, oil leakage, leakage and other phenomena, and timely adjustment.

8、机组运行会使柴油机温度升高，严禁触摸高温表面和高温液体。例如：排气管、涡轮增压器、油底壳、增压空气管、高温冷却液和润滑油管内的润滑油，切莫徒手卸下冷却液加注口盖。

8.And unit operation will raise the temperature of the diesel engine, forbidden to touch the surface temperature and high temperature liquid. For example: exhaust pipe, turbocharger, oil pan, air pressurized pipe, high temperature coolant and lubricating oil in the lubricating oil, to refrain from hand to hand to unload cooling liquid filler flap.

9、机组在低温（5℃以下）应在冷却液中加入 50%的防冻液，或在停机后将冷却液排放干净，以防冻坏机体。低温起动组时，切勿用辅助起动液或类似品来起动装有空气预热装置（预热塞/预热器）的柴油机，否则将会在进气管内引起焊炸，造成人身伤害。

9.Unit below the low temperature (5 DEG C) should be 50% antifreeze is added in the cooling liquid, or in the stands after the cooling liquid discharge clean, the frozen body. Cold starting group, never with auxiliary starting liquid or the like to start with air preheating device (glow plug / preheater) of diesel engine, otherwise it will in the intake pipe caused explosive welding, resulting in personal injury.

10、机组要良好的接地线（电阻不得大于 2 Ω），在机组运行中，严禁徒手触摸电机和开关屏内的接线螺栓，防止触电事故。

10.Unit to a good grounding line (resistance is not 2), in the unit operation, the manual touch of the motor and the switch panel to touch the wiring bolts to prevent electric shock accident.

产 品 简 介

Product introduction

机组是以柴油机为动力，匹配同步发电机和控制屏，将柴油机、发动机、控制屏三大部件组装在共用底架上而组成的成套发电设备。具有结构紧凑，热效率高，燃料储存容易，占地小，能快速供电等优点。适用于工矿企业、山区海岛、油田等远离公用电力网的单位为长期供电设备。也可适用于医院、机场、宾馆、高层建筑的消防设备、人防工程等单位作为应急、备用电源。其工作原理：由柴油机的飞轮经弹性圈、柱销与联轴器联接驱动发电机，由控制屏控制、监视、调整发电机的输出电压，并向外供电。

Controlled by and for easy storage unit is a diesel engine as power, matching the synchronous generator and control screen, the diesel engine, the engine control panel three components are assembled in the common chassis and the composition of the complete sets of power equipment. With compact structure, thermal efficiency is high, fuel, covers an area of small, fast power supply etc.. Suitable for industrial and mining enterprises, mountainous island, oil away from the utility power network units and long-term power supply equipment. Can also be used in hospitals, airports, hotels, high-rise building fire fighting equipment, civil air defense engineering and other units as an emergency and standby power supply. Its working principle: the diesel engine flywheel through an elastic ring column pin coupling driven generator Screen control, monitoring, adjust the output voltage of the generator, and out of power.

产品依据 CB2820 《工频柴油发电机组通用技术条件》生产、检验、交付。

Products based on CB2820 < power frequency diesel generator set general technical conditions > production, inspection, delivery.

一、机组的配置

One, unit configuration

机组的配置是根据机组大小，而择优选用了不同型号的柴油机为原动力，主要有 95、4100、4105、135、150、190 型系列柴油机。发电机则按用户的要求给予配置。具体规格及技术参数见表一。同时可根据用户的要求制造成下列形式的机组。

Unit configuration is based on the size of the unit, and the selection of different

models of the diesel engine for the original power,main yes95、4100、4105、135、150、190Type series diesel engine Generators are given according to the requirements of the user configuration. Specific specifications and technical parameters of the table 1. At the same time according to the requirements of the user can be manufactured into the following forms of the unit.

1、固定式机组：机组三大部件组装在共用底架上，永久性固定装配在某个地方使用。其外形尺寸见图一、图二。

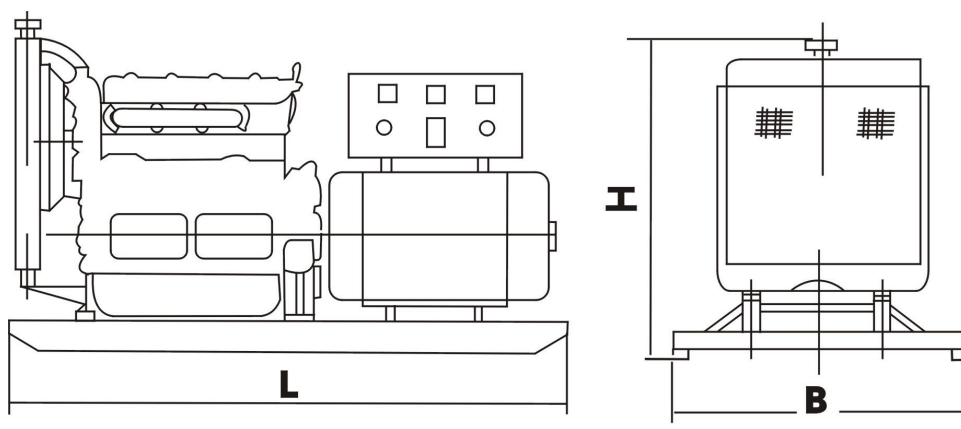
1, fixed unit: unit three parts assembled on a common chassis, fixed permanent assembly for use in a place. Its dimensions is shown in Figure 1 and Figure 2.

2、低噪音机组：机组的三大部件组装在消音箱内，从而使用机组的噪音可降低至 80db（A）以下（1 米外测量）。

2, low noise unit: unit three parts of the assembly in the silencing box, resulting from the use of units and the noise can be reduced to 80dB (a) (1 meter measurement).

3、移动电站：机组的三大部件组装在底架带车轮子可移动的电站。将三大部件组装在汽车上即成为汽车型移动电站。将三大部件组装在消音箱内，并装在汽车上即成为汽车型低噪音移动电站。

3, mobile power station: unit three parts of the assembly on the under frame belt wheel mobile power station. Three parts assembled car type mobile power station in the car become a. Three major components of the assembly in the silencing box, and installed in the car is a car type low noise mobile power station.



图一 外形图

表 1

一、机组主要技术参数																					
额定电压：400/230V							功率因数：COS φ：0.8滞后							供电制：Y接法 三相四线制							
额定频率：50Hz							额定转速：150r/min							电压整定范围：不少于±5%额定电压							
二、机组规格型号及电气参数																					
参数名称	单位	95(100)系列柴油机					135型系型柴油机										150 190系列柴油机				
		12 GF	15 GF	24 GF	30 GF	40 GF	50 GF	75 GF	100 GF	120 GF	150 GF	200 GF	250 GF	300 GF	360 GF	400 GF	500 GF	630 GF	800 GF	900 GF	
额 定 功 率	kw	12	15	24	30	40	50	75	100	120	150	200	250	300	360	400	500	630	800	900	
额 定 电 流	A	22	27	43	54	72.2	90.2	135	181	216	271	361	451	541	652	724	905	1140	1148	1629	
电压稳定调整率	%	≤±5					≤±3										≤±2.5				
电 压 稳 定 时 间	S	≤3					≤3										≤1.5				
电 压 波 动 率	%	≤1.5					≤1										≤1				
频率稳定调整率	%	≤5					≤5										≤0-5(可调)				
频 率 稳 定 时 间	S	≤7					≤5										≤7				
频 率 波 动 率	%	≤1.5					≤1.5										≤1.0				
燃油耗（满载）	kg/h	3.1	3.9	6.1	7.5	10.1	12.5	17.8	23.8	28.6	35.7	47.6	59.5	71.4	83.2	92.4	106.8	131.9	167.5	188.5	
重 量	kg	460	460	750	800	1100	1400	1700	1700	1900	3200	340	3500	3600	3800	4000	9100	11800	12500	13600	

说明：1、本表为国产柴油匹配“嘉利捷”牌发电机（250kw 以上为兰电发电机）的参考表。

2、本表仅供参考，对本公司不构成约束力，如有改动，恕不另行通知。

1. Description: 1, this table for domestic diesel matching "Jialijie" brand generator (250KW above for the orchid generator) reference table.

2. this form is for reference only, and is not binding on the company, if any changes are subject to change without notice.

表 2

规格 尺寸mm		12	24	40kw	50kw	75	120k w	150k w	200	300k w	360	500k w	630	900k w
		kw	kw			kw			kw		kw		kw	
		15	30			100			250		400		800	
长	L	1300	1680	2100	2100	2700	2900	3230	3400	3500	3500	5300	5925	6050
宽	B	560	720	780	780	900	1000	1256	1370	1370	1400	1750	1790	1810
高	H	890	1070	1240	1240	1350	1450	1630	1800	1800	1800	2778	2778	2780

说明：1、本表为国产柴油机匹配“嘉利捷”牌发电机（250kw 以上为兰电发遇机）的外形尺寸，若机组配置不同，外形尺寸将有所变动国。

2、本表仅供参考，对本公司不构成约束力，如有改动，恕不另行通知。

3、安装尺寸请与本公司联系确定。

Description:

1, this table for domestic diesel engine matching "Jialijie" brand generator (250KW above for the LAN electric generator case), the size of the configuration, if the unit configuration is different, the size of the country will be changed.

2, this form is for reference only, and is not binding on the company, if any changes are subject to change without notice.

3, please contact the company to determine the size of the installation.

二、工作条件

Two, working conditions

机组在下述条件能输出规定功率并可靠工作

Units in the following conditions can be output power and reliable work

A、海拔高度：0m-1000nm(A, altitude: 0m-1000nm)

B、环境温度：5℃-40℃（Ambient temperature: 5 -40）

（注：环境温度低于 5℃时，柴油机应采用低温启动措施，发电机能正常工作）。

(Note: the ambient temperature is lower than 5 C, the diesel engine should adopt the low temperature start measure, the generator can work normally).

C、空气相对湿度：90%（25℃时）（C, air relative temperature: 90% (25 C)

若与上述条件不符时，应按 GB/T6072.1 标准进行修正。

If the condition is not in conformity with the above conditions, the GB/T6072.1 standard should be amended

三、机组电气系统

Three, unit electrical system

机组电气系统视所配发电机的电气原理而定，具体见发电机说明书。

The electrical system of the unit depends on the electrical principle of the generator, which is specific to the specification of the generator.

1、主电路

1, the main circuit

主电路作为机组电能输出电路，由发电机定子输出端（U、V、W、N）引出于接线板上，并与控制屏相联接。接线图如图 2-7 所示。

The main circuit as the unit power output circuit, by the generator stator output (U, V, W, N) on the wiring board, and connected with the control panel. Wiring diagram as shown in Figure 2-7.

2、测量电路

2.measuring circuit

由工频电流表、工频电压表、频率表、转换开关等组成测量电路，用于测量主电路中的电流、电压和频率值，转换开关的手柄转至不同位置，可以从电压电流表上量得主电路中对应相应上的线电压值。

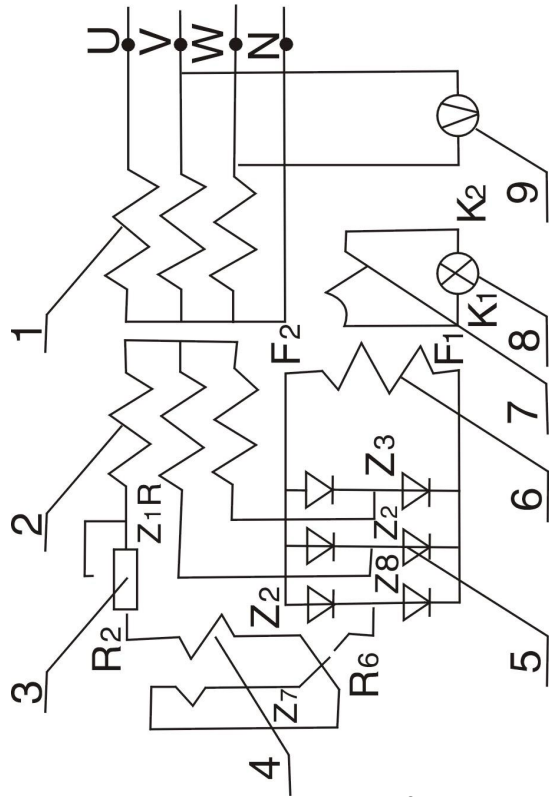
Table by the power frequency current, power frequency voltage meter, frequency meter, converting switch composition measurement circuit, the current in the main circuit of the measurement for, voltage and frequency values, switch of the handle rotates to different positions can from voltage and current sheet winner circuit corresponds to the line voltage value.

3、柴油机电路（不包括手动机）

3, diesel engine circuit (not including hand motive)

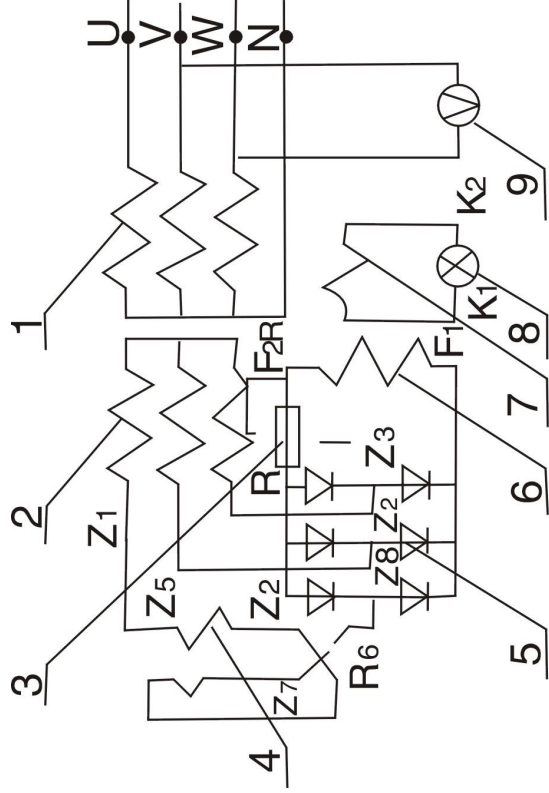
蓄电池、起动电动机、充电发电机、继电调节器、电锁开关、启动按钮等电气设备，经导线连接组柴油机电路由成。该电路作为机组的起动和正常工作时对蓄电池充电之用（线路图见柴油机说明书）。

Battery, starter motor, charging generator, regulator relay, electric lock switch, start button and other electrical devices, connected through wire diesel mechanical and electrical routing into. The circuit as a unit of starting and normal work of battery charging (wiring diagram see diesel engine



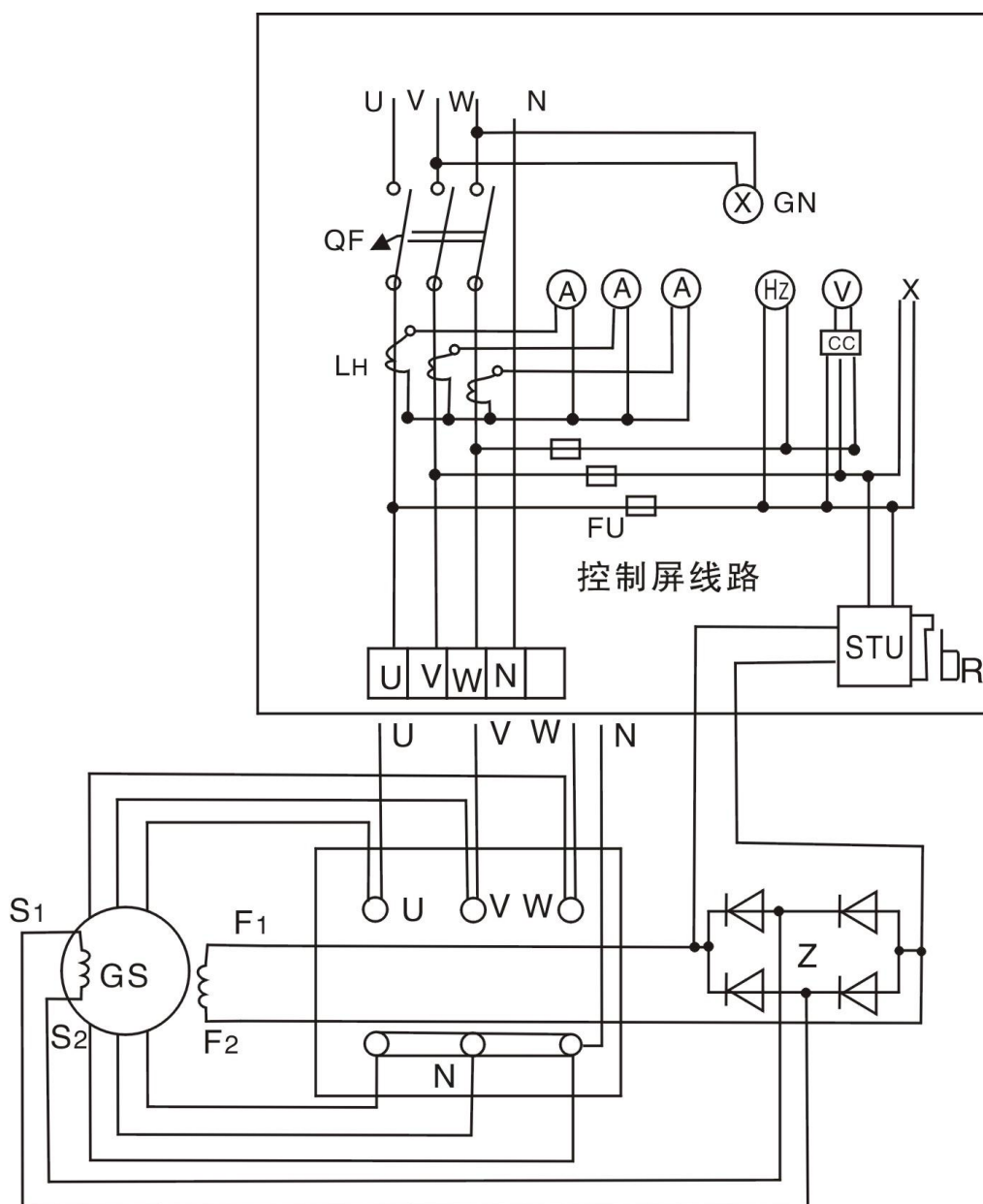
STC3-24kw接线原理图

图2



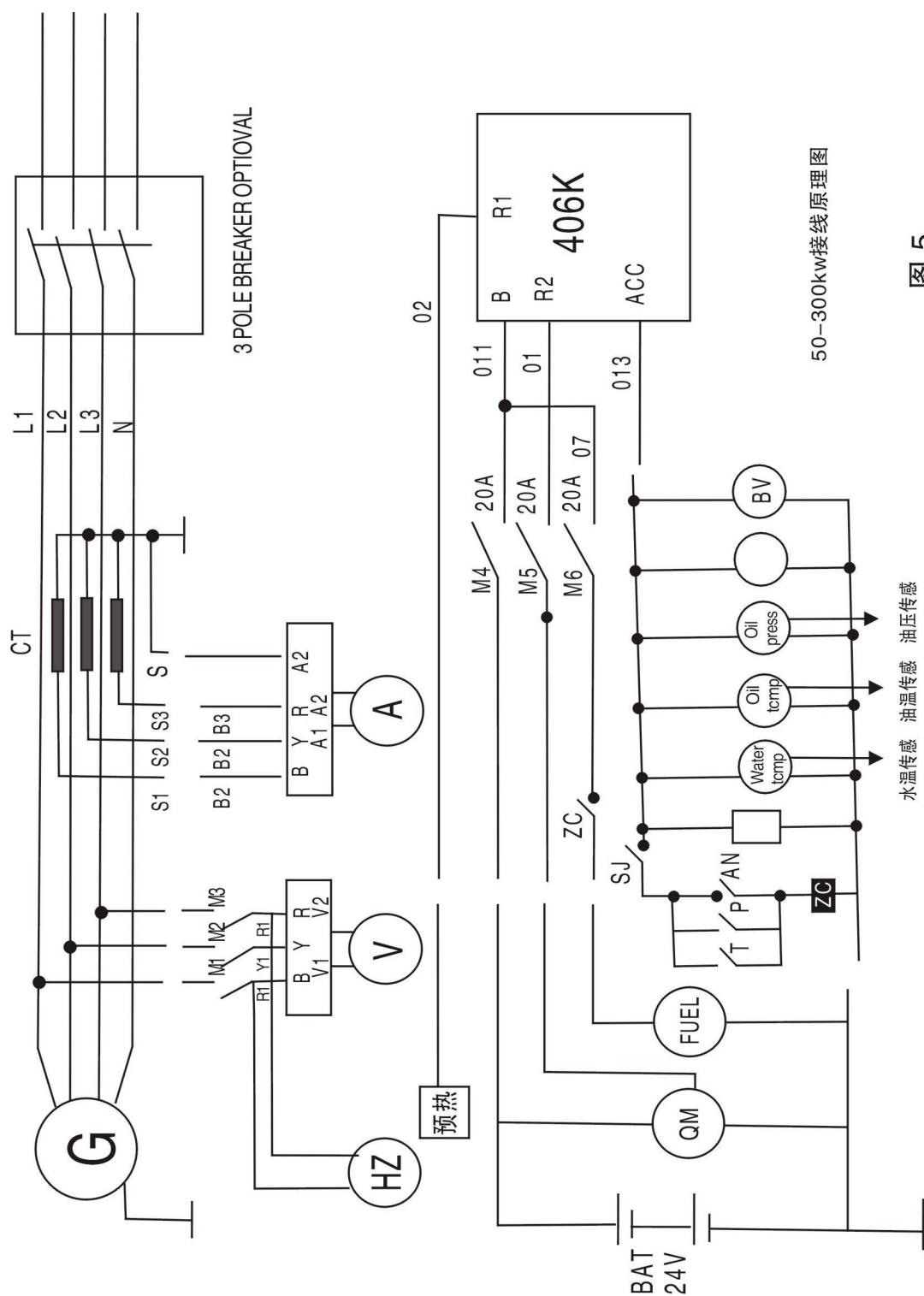
STC30-50kw接线原理图

图3



50-150kw接线原理图

图 4



5

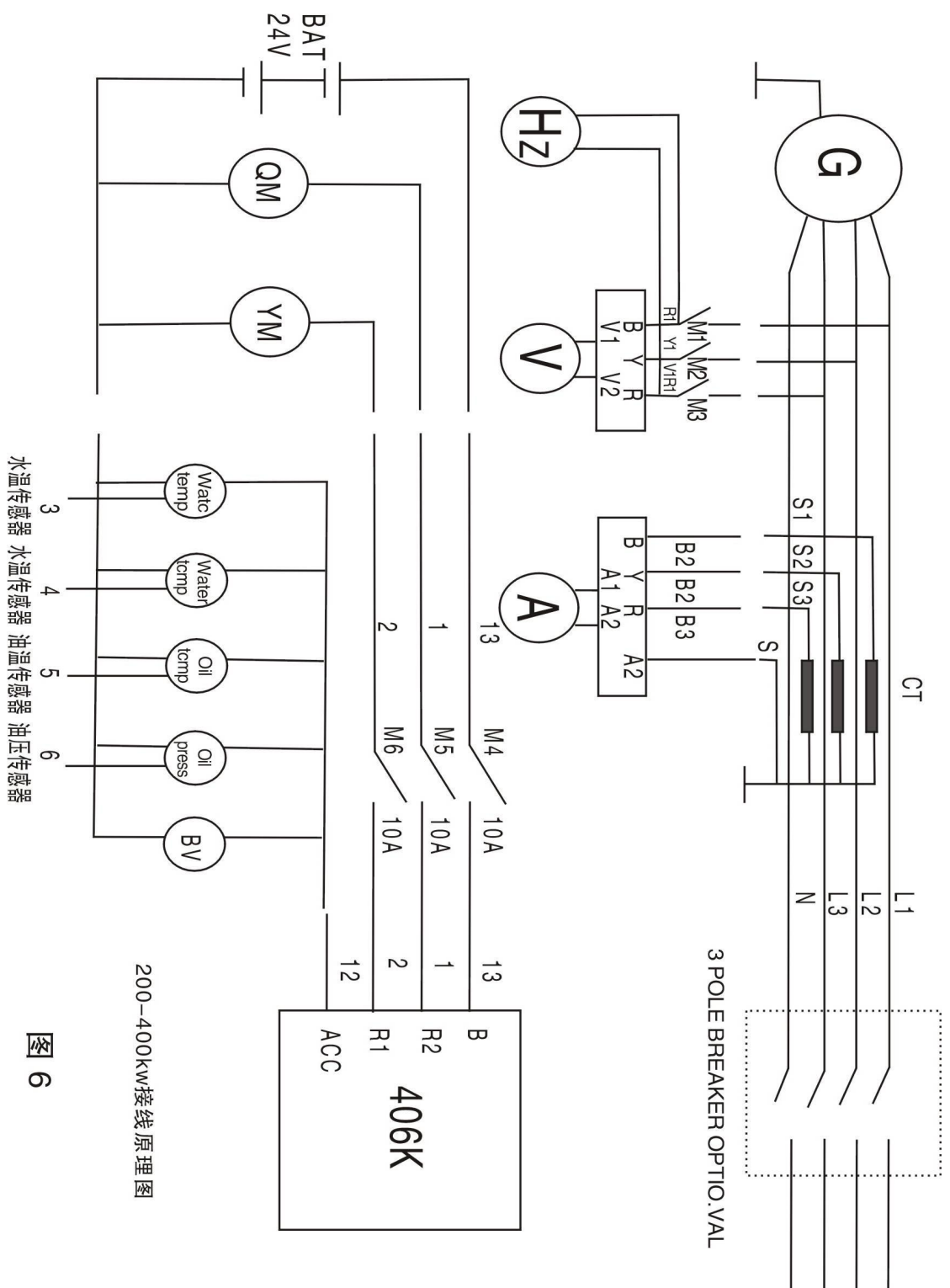
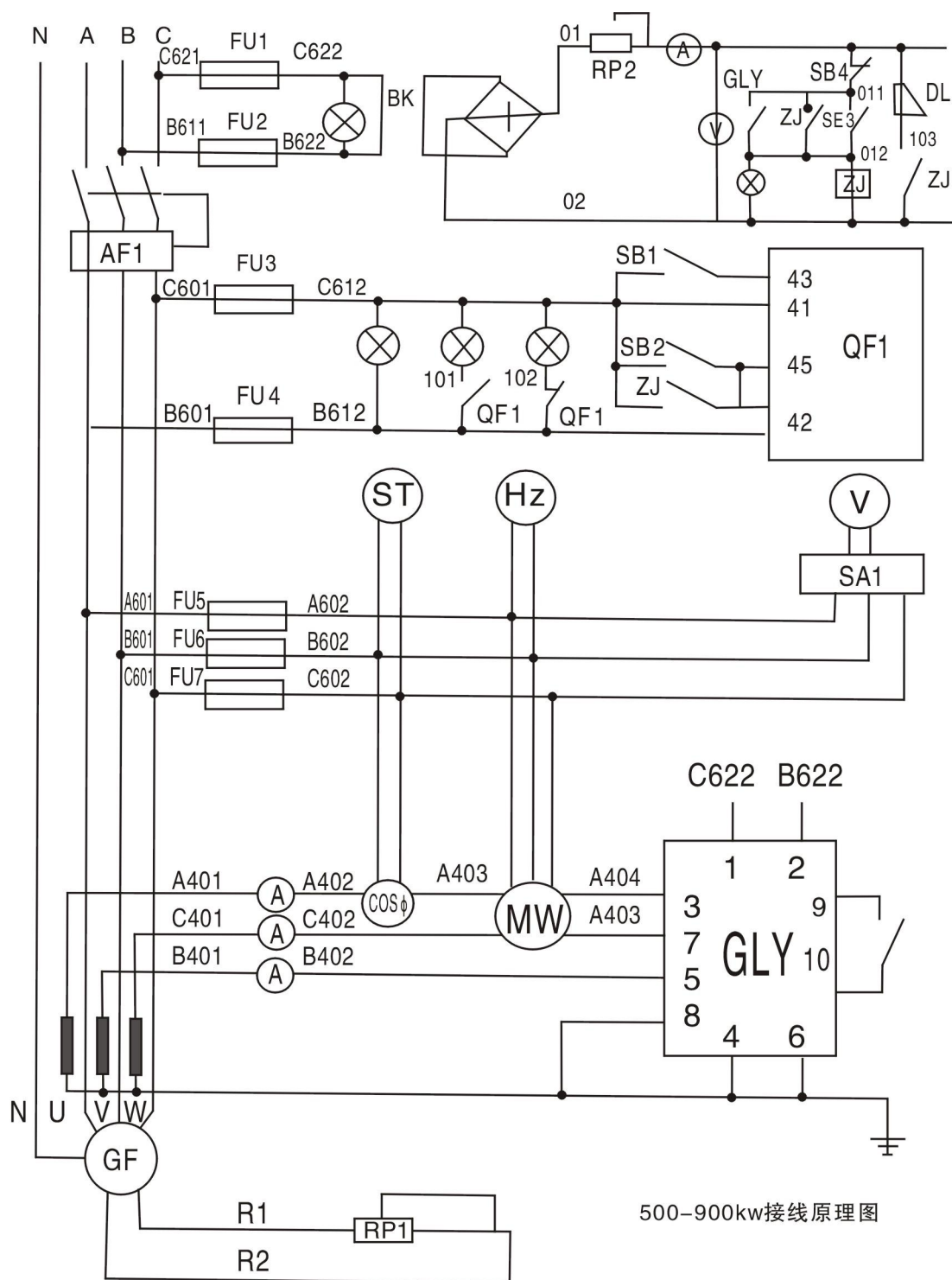


图 6



500-900kw接线原理图

图 7

四、保管与吊运

Four, keeping and lifting

1、机组包装未拆除时，在包装箱上所标注的吊起标志处吊运。已拆包装的机组，利用柴油机的前边吊耳和发电机上吊环进行吊运，并应注意重心位置。

1. Packaging unit is not removed when, in the packing box marked lifting sign lifting. Have unpacked the unit, using the front of the diesel engine crane generator and ear rings to lift and transport, and should pay attention to the position of the center of gravity.

2、机组包装未拆除时，应注意对包装箱的保护。包装拆除后，应将机组放在通风干燥的室内，并用塑料罩遮盖，避免灰尘和水进入发电机内。

2. When packing is not removed, it should pay attention to the protection of packing box. After removing, the unit should be placed in ventilated and dry room, covered with plastic cover to avoid dust and water into the generator.

五、机组安装

五. Unit installation

机组开箱安装前，应先根据装箱单清查所有备品配件。然后将机组到安装位置，就位后应调整，不得有不作实的现象。而后安装滤清器和烟囱，应加接管道将烟囱和消声器接到室外，以保证室内的空气清洁。具体见图八

Unit out of the box before installation, should first according to the packing single inventory all spare parts. And then the unit into the installation position, in place should be adjusted, shall have no real phenomenon. And then install the filter and a chimney, must be connected with the pipeline will be the chimney and muffler is connected to outside, to ensure clean indoor air. Concrete is shown in Figure 8

1、机房要求

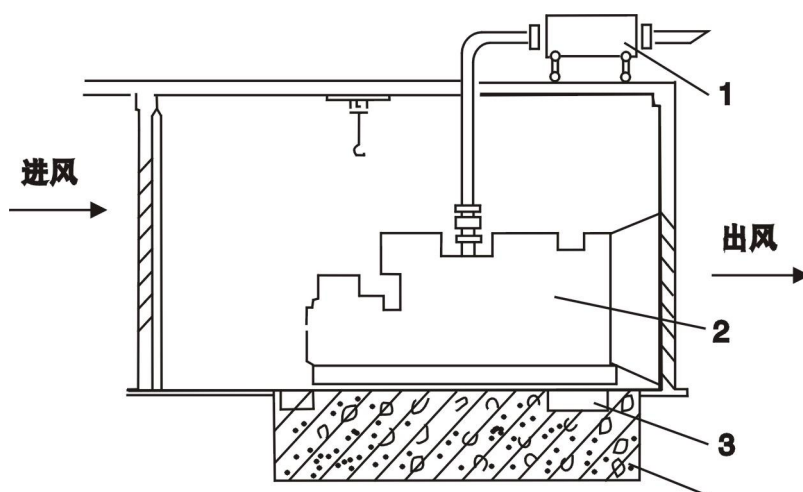
1, room requirements

机组在运行中，由于热辐射，大约有 3-5%燃油总发热量散发在机房，使室温升高。这不仅影响柴油机的各项指标，而且也影响操作人员的工作环境和身体健康。所以机房应有良好的通风条件，若通风条件受到客观条件的限制，应增设排风扇帮助通风。机房的尺寸应在机组外形尺寸基础上四周加长加宽 1.5 米-2 米，有效高度应大于 4 米，便于维修保养。

Unit in operation, due to the thermal radiation, about 3-5% of the total fuel calorific value distribution in the engine room, the room temperature rise. This will not only affect the indexes of the

diesel engine, but also affect the health and the working environment of the operation personnel. So room should be good ventilation conditions, if ventilated by the limitation of objective conditions, should be added to the exhaust fan to assist the ventilation. Room space size should be in the unit dimensions based around lengthened and widened 1.5 m-2 m, the effective height should be more than 4 meters, for the convenience of maintenance.

安 装 示 意 图



1、消声器 2、柴油发电机组 3、集污槽 4、机组地基

图 8

2、机组基础要求

2, the basic requirements of the unit

机组是往复式机械，运行时将产生较大振动，因此其基础应能牢固地固定机组。其要求为：

Unit is a reciprocating machine, running will produce a larger vibration, so the base should be able to firmly fix the unit:

a、基础一般为钢筋混凝土结构，基础应高于机房地面 200-300mm，深度应根据机组规格的大小而定，不得少于 0.5 米。基础重量为机组总重的 1.5-2 倍。混凝土强度等级不低于 C15 级。

A general basis for the reinforced concrete structure, the foundation must be higher than room floor 200-300 mm, depth according to the size of the unit specification, shall not be less than 0.5 meters. Basis weight is 1.5-2 times of the unit weight. Concrete strength grade of not less than C15.

b、基础与机房结霜乐得有刚性连接，以减小机房的振动。

There was room frost foundation and rigid connection, in order to reduce the vibration of the room.

c、基础周围每边比机组底盘每边要长 200-500mm，并在四周留有排水、油的沟槽便于排水和油污。

Base around each side of the unit chassis to be long 200-500mm, and in the surrounding drainage, oil trench to facilitate drainage and oil.

d、地脚螺钉应根据机组规格的大小而定，浓度取为 300-600mm，地脚螺钉应进行二次浇筑，即先留预埋孔，待机组就位时，实地进行二次浇筑。

anchor bolt should be according to the size of the unit specification and, taking the concentration of 300-600mm, anchor bolts should be secondary casting, which is to keep pre buried hole, standby group is in place, the field of secondary casting

六、使用与操作

Use and operation

机组经过长途运输或长期封存，在使用前（安装好后）应按规定做好准备和检查工作。

Unit after long-distance transport or long-term storage, in the use of the former (after installation) shall be in accordance with the provisions of the preparation and inspection.

1、清除机组内外各部分的灰尘和污垢，包括控制屏内，仪表板及发电机炭刷、集电环等，炭刷和集电环严禁用带油物擦拭。如有漆迹 号砂纸擦拭去除。

1.Remove indoor unit and outdoor unit of each part of the dust and dirt, including control panel, dashboard and carbon brush of generator, collector rings, carbon brush and collector ring with oil wipe is prohibited. If there is a trace of lacquer sandpaper to wipe purify.

2、检查机组各连接紧固件是否可靠，有无松动或缺件，排除不正常的现象

2. check the unit to connect the fasteners are reliable, there is no loose or missing pieces, excluding abnormal phenomenon

3、检查控制屏内各电气元件连接是否牢固，排除松动或脱焊现象。

3.Check the electrical components inside the screen is connected firmly, remove loose or sparks.

4、用 500V 兆欧表（额定电压低于 100V 者用 250V 兆欧表）检查机组各独立电气回路对地及回路间的绝缘电阻。测量时，各开关处于接通位置，各开关处于接通位置，半导体器件、电容器等均应拆降或短接。测得电阻应不小于 2Ω 。如发电机受潮。在运行前必须进行干燥处理。

4. use 500V megohm meter (rated voltage less than 100V by 250V megohm table) to check the

unit each of the independent electric loop and loop between the insulation resistance. When measuring, the switch is connected to the position, the switch is connected to the position, semiconductor devices, capacitors, etc. shall be split down or short circuit. Measured resistance should not be less than 2 ohms. Such as moisture generator. In front of the operation must be dry.

5、打开水箱加水盖和放水孔，将清水加入水箱中并让水流出，直至流出的水中无锈迹时，关闭放水孔，再将水箱加满同。气温低于 5℃时，应在水中加入防冻液。

5.Open water to cover and a water discharging hole, water is added to the water and let the water out, until the outflow of water is free of rust, close drainage hole, then the tank is full. The air temperature is below 5 DEG C, should be in the water by adding antifreeze.

6.检查柴油机油底壳内机油的存量及污浊情况。油量不足时应添加至规定油面位置，变质或污浊应予更换。所用机油的质量要求见柴油机说明书。

Check the diesel oil bottom shell oil stock and dirty conditions. Lack of oil should be added to the specified location of oil, deterioration or dirty should be replaced. The quality of oil and asked to see the specification of diesel engine.

7.按柴油机说明书规定，选择合适燃油（季节不同选用燃油号不同）打开燃油阀门，用输油泵上的手油泵排除燃油系统中的空气。

7.According to the specification of the diesel engine, choose the appropriate fuel (season, choose the different fuel number) to open the fuel valve, oil pump with the hand pump to exclude the fuel system in the air.

8、检查柴油机的供油、润滑和冷却系统各管路接头是否有漏油、漏油现象，及时排除隐患。

9、8.Check the diesel engine oil supply, lubrication and cooling system of the pipeline joint whether there is oil leakage, oil leakage phenomenon, in time to eliminate hidden dangers.

9、检查蓄电池的接线及蓄电池容量，接线松动时应拧紧，电池容量不足时应充电（新电池应按规定充电）。

9.Check the battery connection and battery capacity, wiring loose should be tightened, when the battery capacity is insufficient to charge (the new battery should be charged according to the regulations)

10、检查各电气仪表是否完好，指针是否指在正确位置，频率表除外

10.Check whether the electrical instruments are in good condition, whether the pointer is in the correct position, except for the frequency meter

11、检查空气机油、燃油滤清器的清洁情况，如污浊应清洗干净或更换。

11. Check the air cleaning oil, fuel filter, such as dirt should be cleaned or replaced.

12、将绝缘等级和导线截面符合的电缆（铜芯电缆承载电流为 $5\text{A}/\text{mm}^2$ ）或一电线一端接在接线板上，一端接入控制屏，应同相序相接。

12. The insulation level and people line in line with the cross-sectional area of the cable (copper core cable current carrying $5\text{A}/\text{mm}^2$) or a wire end connected on the wiring board, one end is connected to the control panel, should be the same phase sequence phase

13、机组应可靠接地，接地线应和发电机接地螺钉连接。

13. The unit shall be grounded reliably and the ground wire shall be connected with the generator grounding screw.

14、机组在完成使用前的准备和检查后方可起动。将喷油泵供油手柄推到转速约在 700 转/分左右的位置。

14. The unit is ready to be used before the completion of the use of the rear can be started. The fuel injection pump to the handle is pushed to the speed of about 700 RPM / min about the location.

15、旋转电锁钥匙，接通启动电路。按下启动按钮，机组即可起动。若 5-10 秒钟内未能起动应立即释放按钮，待停放 1 分钟后在作第二次启动。如连续三次不能启动时，应停止启动，待查出原因并排除故障后再进行启动。机组启动后应立即释放按钮，将电锁钥匙拨回中间位置。

15. And rotating lock key switch on circuit. Press the start button, the unit can be started. If for 5-10 seconds failed to start should immediately release button to be parked after 1 minute in the second start. Such as three times in a row can not start should be stop start, find out the reason side by side in addition to fault start it again. After the launch of the set should immediately release button and pull the electric lock keys back to the middle position.

16、按柴油说明书要求进行低速暖机，然后慢慢扳动调速手柄，加大油量，使发动机转速逐渐提高到额定转速，待柴油机水温高于 55°C ，机油温度高于 45°C 时方可加负载。

16. Diesel specification according to the requirement of low warm machine, then slowly pulled the handle speed, increase the amount of oil, the engine speed gradually increased to the rated speed, to be diesel engine water temperature higher than 55°C , the oil temperature is higher than 45°C can load

17、观察控制屏上各仪表指示读数是否正常。在额定频率（50Hz）的情况下，电压应达到额定值（400V）。若电压有偏差，可用控制屏的电压调节按钮调节触发器，使电压达到额定值。（12kg 以下机组为变阻器调节，24kw 以上为触发器调节）。在一切正常的情况下，提高柴油机转速将频率升至 52Hz。以便满负荷工作时，能确保电压和频率达到额定值。

17. Observe and control the screen on the instrument indication reading is normal. Under the

rated frequency (50 Hz), the voltage should be reaches the rated value (400V). If the voltage deviation, the screen can be used to control the voltage adjustment button adjusts the trigger so that the voltage reaches the rated value. (under 12kw unit for variable resistor adjustment, 24kw above as a trigger regulation). In all normal circumstances, improve the diesel engine speed frequency rose to 52Hz. to work at full capacity, to ensure that the voltage and frequency to reach the rated value.

18、合上空气开关，机组即向外供电。供电时应尽量避免突加或突卸负载。

18.Close the air switch, the unit that is outside the power supply. When the power supply should try to avoid sudden increase or sudden discharge load.

19、机组工作时必须经常检查运行情况，发现不正常的振动和噪音或有漏油、漏气、漏水现象，以及各安装连接件有松动现象，以及发电机集电环有不正常的火花时，应立即停要调整。

19.When the unit works must check the operation condition of business, found that the abnormal vibration and noise or oil spills, leakage, water leakage phenomenon, and the installing and connecting pieces have loose phenomenon, and the generator collector ring is not normal spark should be stopped immediately to adjust.

20、机组停机前应先去卸去负载，再断开空气自动开关，停止向外供电。然后调节供油调节手柄，慢慢降低转速至 700-1000 转份，继续运转 5 分钟后，再扳动停机手柄停机，并及时进行维护保养，以使下次使用。

20.Unit shut down before should first unloading, broken open automatic air switch, stop supply outward. And then adjust the oil supply regulating handle and slowly lowered speed to 700-1000 turn copies, continue to run 5 minutes after, pulling down a handle shutdown, and timely maintenance, used to make the next.

七、机组的维护保养

Unit maintenance

除柴油机和发电机接各自说明书要求进行维护、保养工作外，机组总体也应当进行定期维护和保养。

In addition to diesel engines and generators to meet the requirements of the specification for maintenance, maintenance work, the unit should also carry out regular maintenance and maintenance.

1、机组应在生月或机组累计运行时间 200-500h 后，进行一次维护保养，其主要内容如下：

1.The unit should be in the month of birth or the cumulative running time of 200-500h, after a maintenance, the main contents are as follows:

a、进行一次彻底地清洁工作，去除油污、尘埃、杂物、以及备、附件和工具的擦试、加油。

a.And to conduct a thorough cleaning, remove grease, dust, debris, and equipment, accessories and tools for cleaning, gas.

b、全面的检查各电气连接部位接触是否良好。各机械连接部位是否牢靠，尤其要注意转动机件、支脚螺钉的紧固情况。各种保护装置的保护作用是否可靠，并排除所发现的故障和异常现象、预防接触不良，短路或断路等事故的发生。

b.A comprehensive inspection of the electrical connecting parts contact is good. The mechanical connection parts are solid, with particular attention to the rotating parts, fastening screws of the supporting foot. Protective function of the protective device is reliable and exclude found fault and not normal phenomenon, prevent defective contact, short circuit or open circuit, such as accident occurred

c、根据机组使用要求和自然环境条件的变化，做好防护工作。冬季：应及时换用防冻油和冷却液；夏季：应加强通风干燥措施；雨季：应注意防潮。

c.According to the use requirements of the unit and the changes of natural environment conditions, do a good job of protection work. Winter: should be promptly replaced with antifreeze oil and coolant; summer: should strengthen the ventilation and dry measures; rainy season: should pay attention to moisture

2、每年定期对机组的各部分进行全面的清洗外，还需检验、调整、修理或更换已损坏不合要求的零部件。如果在现场条件下无法进行，则需请有关修理厂协作进行。如喷油泵的检验和调整、电机轴承的清洗等。

2. regularly every year to the unit of each part of the comprehensive cleaning, inspection, adjustment, repair or replacement of damaged substandard parts. If impossible under field conditions, please repair factory cooperation. Such as inspection and adjustment of injection pump, motor shaft bearing cleaning.

3、机组在短期停放期间，每周或定期作一次维护保养。机组长期停放期间，每3个月应进行一次启动，运行半小时后进行保养一次。

3.Units in the short period of time, once a week or once a week for a long period of maintenance, the unit should be started every 3 months, running half an hour after maintenance.

八、机组故障及排除

Unit trouble and trouble shooting

机组总体的故障及除除方法见表3，柴油机的故障及排除方法见柴油机说明书；发电机的故障及排除方法见发电机说明书。

The overall failure of the unit and in addition to the method of Table 3, diesel engine failure and troubleshooting methods see diesel engine specifications; generator fault and troubleshooting instructions

九、机组的封存

Unit storage

暂时不用的机组，在 3 个月以内的可不进行油封。但必须放掉冷却水、机油，彻底整理和清洁机组之后，在电刷下面用厚牛皮纸衬垫，用塑料布将柴油机的进、排气口和发电机端盖上的通风孔包扎好，同时应将机组底盘垫高、垫稳，用塑料薄膜遮盖。最好在库房存放，注意防潮，取下蓄电池，单独存放。长期存放不用机组，必须进行油封，防止 机件锈蚀损坏，妥善保管。油封要求如下：

Temporarily do not have units, in within 3 months of oil seal. But it must be drained the water cooling, oil, after thorough cleaning and organizing unit, under the brush with thick kraft liner, diesel engine with plastic sheeting, bound the ventilation holes on the cover of the exhaust port and the generator terminal, also should to be a unit of the chassis mat, pad stable, covered with plastic film. Best in the warehouse storage, pay attention to moisture, remove battery, stored separately. Long-term storage without unit must be oil seal, to prevent damage to parts rustily, safekeeping. Seal requirements are as follows:

1、柴油机的机油和冷却水全部放掉，放水开关不要关闭，燃系统（油箱、滤清器、油泵等）的燃油全部放出。

1.Diesel engine oil and cooling water drain off and drain switch do not close, burning fuel (tank, filter, oil pump, etc.) system release all

2、从排气支管向每个缸注入 100-200g 清洁机油，并转动曲轴数十次，使机油分布在气缸各部分。

2.Injection of 100-200g clean oil from the exhaust manifold to each cylinder, rotate the crankshaft and dozens of times, so that the oil distribution in different parts of the cylinder.

3、拆开侧盖板、在曲轴、连杆上涂以油封油，取开气门室盖，用加热到 100-2000℃的脱水凡士林润滑气门机构。

3.And open the side cover, on the crankshaft, connecting rod coated with oil, open the valve chamber cover, heating to 100-2000 DEG C dehydration vaseline to lubricate the valve mechanism

4、将柴油机排气口、空气滤清器、油箱通气孔等出、入口都用油纸包封好。

4.The diesel engine exhaust port, air filter, fuel tank vent out, with a brown paper bag and sealed the entrance.

5、机组所有零部件、工具、备附件，以及机组上一切裸露而无油漆的金属表面，都需要用汽油擦净后，涂一层黄油，脱漆的外表面应补刷油漆。

5. all parts, tools, spare parts, as well as the unit on all bare metal surfaces, all need to use gasoline to clean, coated with a layer of butter, paint off the surface should be coated with paint

十、保证

十一、ensure

在用户严格按照机组柴油机、发电机使用说明书的规定，正确地操作与存放的情况下，自用户第一次调试起计算，6 个月内或 1000 个小时（以先达到为准）一切因机组制造缺陷引起的故障，由公司实施“三包”服务，机组的易损件、日常配件、人为错误操作、疏忽保养及一切不按使用说明书的规定所造成地失误均不在“三包”服务之内。

Users strictly in accordance with the diesel engine, generator manual provisions, correct operation and storage, counted from the user first commissioning, six months or 1000 hours, to be the first to achieve is all because the unit manufacturing defects caused by fault, by the company the implementation of "Three Guarantees" service, unit of wearing parts, fitting routine, human errors in operation, negligence and all maintenance not according to the use specification requirements caused by mistakes were not included in the "Three Guarantees" service

表 3

序号	故障特征及原因 Failure characteristics and causes	排 除 方 法 Elimination method
1	<p>壳 体 带 Shell belt</p> <p>(1) 接触不良，绝缘电阻过低。 (1) poor contact, insulation resistance is too low</p> <p>(2) 相线与机壳相碰。 (3) Line and shell collision</p>	<p>(1) 用 500V 兆欧表测量绝缘电阻，电阻值低于 1 兆欧，则应检查线路绝缘有无损坏。 (2) Measuring insulation resistance with 500V MB, the resistance value of less than 1 MB, you should check the line insulation is not damaged.</p> <p>(2) 使接地、接零线接触良好。检查线路、接好断线处或更换民线。</p>

		(3) Make the grounding, the grounding line is in good contact with the line, check the line, connect the line or replace the line.
2	<p>电压表无读数 No reading of voltage meter</p> <p>(1) 发电机不发电。 (2) The generator does not generate electricity.</p> <p>(2) 熔断器芯烧断。 (3) Fuse core burn off</p> <p>(3) 仪表损坏。 (4) Instrument damage.</p> <p>(4) 接线处接触不良或断路 (5) 。 Poor contact or open circuit</p>	<p>(1) 参见发电机说明书。</p> <p>(2) Refer to generator specification</p> <p>(2) 更换熔断体，并查明原因。</p> <p>(3) Replace the fuse link and find out the cause.</p> <p>(3) 更换仪表，并查明原因。</p> <p>(4) Replace the instrument, and identify the cause.</p> <p>(4) 找出断路外并接好或更换导线。</p> <p>(5) Find out the break and connect the wire.</p>
3	<p>元件及接点、触点过热 Element and contact, contact overheating</p> <p>(1) 接头松脱、接触不良。 (2) Joint loose, poor contact</p> <p>(2) 触点或接点烧伤氧化。 (3) Contact or contact burn oxidation.</p>	<p>(1) 检查并接好。</p> <p>(2) Check and connect</p>
4	<p>绝缘电阻过低 Insulation resistance is too low</p> <p>(1) 导线或元件损坏后碰电，绝缘电阻为零。 (2) When the conductor or element is damaged, the insulation resistance is zero.</p>	<p>(1) 查找出故障处，更换损坏元件，消除接地故障。</p> <p>(2) Find out the fault, replace the damaged components, to eliminate the grounding fault.</p> <p>(2) 烘干线圈。 (3) Drying coil.</p> <p>(4) (3) 检查故障处，擦干净、烘干或风干。</p>

	<p>(3) (2) 发电机线圈受潮。</p> <p>(4) Generator coil damp</p> <p>(3) 配电线路受潮。</p> <p>(4) Distribution lines affected with damp</p>	<p>(5) Check the trouble, wipe clean, dry or air dry</p>
5	<p>机组需动过大</p> <p>Unit needs to move too large</p> <p>(1) 联轴器中心不对。弹性圈损坏。</p> <p>Coupling center is not correct.</p> <p>Ring damage</p> <p>(2) 地脚螺钉或底盘安装不稳</p> <p>(3) Anchor bolt or chassis installation is not stable</p> <p>(4) (3) 轴承损坏。</p> <p>(5) Bearing damage</p>	<p>(1) 查找出故障处，更换损坏元件，消除执着地故障。</p> <p>(2) Find out the fault, replace the damaged components, eliminate persistent failure.</p> <p>(2) 紧固地脚螺钉或检修机组安装情况。</p> <p>(3) Install the fastening screws or anchor unit maintenance.</p> <p>(3) 检修或更换轴承。</p> <p>(4) Repair or replace bearing</p>
6	<p>信号灯不亮</p> <p>Signal lamp is not bright</p> <p>(1) 灯泡或座接触不良。</p> <p>(2) Lamp or seat contact</p> <p>(2) 灯泡损坏。</p> <p>(3) The light bulb is damaged.</p> <p>(3) 线路断路。</p> <p>(4) circuit breakers.</p>	<p>(1) 检查修复。</p> <p>(2) Check for repair.</p> <p>(2) 更换灯泡。</p> <p>(3) Change bulb</p> <p>(3) 检查修复。</p> <p>(4) Check for repair.</p>

发电机使用说明

Generator instructions

本使用说明适用于“嘉利捷”牌 STC 系列发电机，不适用其它型号的发电机，机组匹配其它型号的发电机，请查阅同型号的发电机使用说明书。

The use of the use of "Jialijie" brand STC series generator, does not apply to other types of generators, the unit matching the other models of the generator, please refer to the same type of generator instructions.

本系列发遇机为三相带有中性点的星形接法，线电压为 400V，相电压为 230V，频率 50Hz，功率因数 0.8（滞后）。根据用户需要，也可提供 60Hz 及其它特殊电压的发电机。

This series of generators for the three-phase neutral point of the star connection method, the line voltage is 400V, phase voltage of 230V, frequency 50Hz, power factor 0.8 (lag). According to the needs of users, but also can provide 60Hz and other special voltage generator.

本系列发遇机可与原动机直接联接或用三角皮带联接。发电机可证、反两方向转动。连续额定工作。

This series of machines can be directly connected with the prime mover or connected with a triangular belt. The generator can be used to permit and rotate in two direction.

为了使发电机能正常运转发电，请在使用前详细阅读说明书。

In order to enable the generator to operate normally, please read the instruction carefully before using.

（一）规格及性能：

(1) specifications and performance:

型 号 model	功 率 Power		电 流 electric current (A)	极 数 Pole number	转 动 Rotation
	KVA	KW			
STC-3	3.8	3	5.4	4	1500
STC-5	6.3	5	9	4	1500
STC-7.5	9.4	7.5	13.5	4	1500

STC-10	12.5	10	18.1	4	1500
STC-12	15	12	21.7	4	1500
STC-15	18.8	15	27.1	4	1500
STC-20	25	20	36.1	4	1500
STC-24	30	24	43.3	4	1500
STC-30	37.5	30	54.1	4	1500
STC-40	50	40	72.2	4	1500
STC-50	62.5	50	90.2	4	1500

本系列发电机采用谐波励磁，在定子铁芯上除了主绕组外，另有一套谐波绕组，经过三相桥式硅整流器整流后通入磁场绕组进行励磁。由于三次谐波电压在电机负载时将相应增高，因此无须其他任何复杂电压自动调节器即可达到自激恒压性能。

This series generator with harmonic excitation, the excitation winding in the stator core in addition to the main winding, another set of harmonic winding, after three phase silicon bridge rectifier pass into the magnetic field. Because of the third harmonic voltage in the motor load will increase accordingly. Therefore, no any other complex voltage automatic regulating device can achieve self excitation and constant voltage performance.

本系列发电机具有优良的动态性能，它能直接空载起动 0.7 倍容量的鼠龙型异步电动机，而无须附加任何起动装置。

This series generator has excellent dynamic performance, it can direct no-load starting 0.7 times the capacity of mouse type asynchronous motor, without any additional starting device.

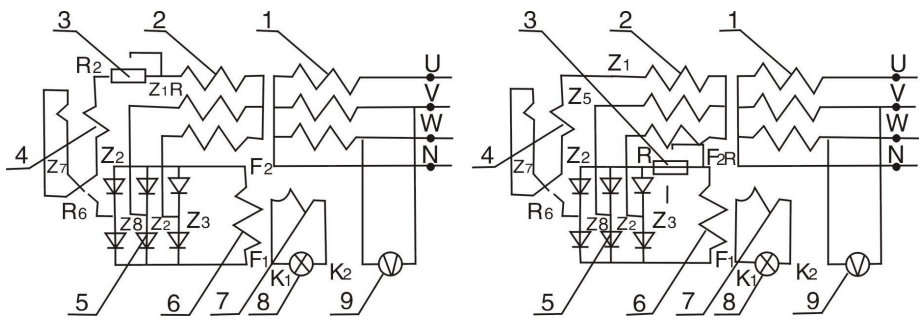
(二) 结构

(two) structure

本系列发电机采用旋转磁场式，机座及端盖均用铸铁制成，定子铁芯由 0.5mm 厚优质硅钢片叠压而成，磁极铁芯用 1mm 厚电工钢片叠成，导线采用高强度漆包线，定子绝缘为 B 级，转子绝缘为 B 级，发动机开关箱装配在机座上方，箱内装有接线板，硅整流元件和磁场变阻器（30-50kw 磁；场变阻器外附）面板上装有 6.3V 指示灯和电压表，发电机输出电缆线由接线板通过开关箱背后的出线孔板引出，使用时，先把出线孔板的密封薄膜用小刀戳穿。电机的接线原量图如图一所示图中 Z4, Z5 及 Z6, Z7 为不同匝数的副绕组基波线圈，两者可通过改变连接片正串或反吕来达到调整空载电压的目的，当 Z4 接 Z7 及 Z6 接 Z8 时，空载电压升高，当 Z4

接 Z6 及 Z7 接 Z8 时，空载电压降低，当 Z4 接 Z5 或 Z6 接 Z5 及 Z7 接 Z8 时，即为两个基波线圈单独使用。出厂时，连接片均已接好，用户也可根据需按上面方法改接基波线圈。

By the magnetic (30-50kw using this series generator rotating magnetic field, the base and the end cover are made of cast iron, the stator core by 0.5mm thick and high quality silicon steel sheet laminated and magnetic pole iron core for 1mm thick electrical steel laminations, wire with high strength enamelled wire, the stator insulation for class B, the rotor insulation for class B, engine switch box assembly in the top of the frame, the box is provided with a wiring board, silicon rectifier element and field rheostat; field rheostat attached) panel is provided with a 6.3V indicator and voltage meter, the generator output cable wiring board through the switch box behind the outlet hole plate leads to using, the outlet hole plate sealing film Knife skewers. Electrical wiring original diagram as shown in figure figure Z4, Z5, Z6, z7 for different number of turns of the secondary winding of the fundamental coil, both of which can be by changing the connecting piece is on or anti Lu to adjust the no-load voltage, when the Z4 connected z7 and Z6 connected Z8, no-load voltage increases. When the Z4 connected Z6 and z7 connected Z8, no-load voltage decreased, when the Z4 connected Z5 or Z6 Z8 Z5 and z7 grounding, that is, two fundamental coil used alone. The factory, connecting pieces are connected, users can also according to need according to the above methods modifying fundamental coil.



图一 接线原理图 Wiring schematic diagram

1、主绕组 Main winding 2、副绕组谐波线圈 Auxiliary winding harmonic coil

3、磁场变阻器 3, rheostat 4、副绕组基波线圈 Auxiliary winding fundamental coil
 5、硅整流器 Silicon rectifier 6、励磁绕组 Excitation winding 7、指示灯绕组
 Indicator winding 8、批示灯 Indicator light 9 电压表 voltmeter

序 号 Serial number	名 称 name	规 格 Specifications		
		3-10kw	12-24kw	30-50kw
3	磁场变阻器 Rheostat	BC ₁ -15W 10 Ω	BC ₁ -150W 7.5 Ω	BC-500/2.5 Ω
5	硅 二 级 管 Silicon two grade pipe	2CZ-5A800V		SQL14 40A 1000V
8	批 示 灯 Indicator light	XD ₁ -6.3V		
9	电 压 表 voltmeter	85L ₁ -V 0-500V		69L ₁₃ -V 0-500V

(三)使用前注意事项:

(three) note before use:

1、将输出电缆接到发遇机开关箱中的接线板上，电缆应有足够的截面积，保证能安全输电。

1, the output cable is connected to the terminal board in the case of the machine switch box, the cable should have enough cross-sectional area to ensure the safety of the transmission.

2、打开后盖外罩，检查电刷是否正常。

2.Open the back cover, check whether the normal brush

3、每一用电端均应装有开关及适当容量的熔断丝，开车前各用电端的开关均应置于断开状态。

3.Each end shall be equipped with a switch and the appropriate capacity of the fuse wire, the

switch should be placed on the front end of the switch off state.

(四) 开车及停车

Driving and parking

1、开车

1.drive a car

(1) 把开关箱中的磁场变阻器调节至短接位置，即转向箭头所指的电压最高位置。

(1) The rheostat in the switch box to adjust short position, namely to the highest voltage position arrow.

(2) 启动原动机，当转速接近额定值时发电机即能自励建立电压，调节原动机转速、使转速略高于额定转速，以补偿满负荷时的转速下降，同时调节磁场变阻器，使电压表的指示值达到 400V.

(2) The launch of the original motivation, when the speed close to the rated value generator which can self establish voltage, adjusting the prime mover speed, the speed slightly higher than the rated speed, to compensation full load speed decreases, while regulating rheostat, the voltage meter indicating value reaches 400V.

(3)在用电端将开关合上，即可正常供电。

(3) the switch is closed at the end of the power supply, and the power supply is normal.

2、停车

2. parking

(1) 各用电端卸去负载，并切断开关。

(1) The electric load unload end, and cut off the switch

(2) 将原动机停车。

(2) Stop the prime mover

(3) 把磁场变阻器调节至短接位置。

(3) The magnetic field rheostat to short position.

3、注意事项

matters needing attention

(1) 避免发电机输出端短路，因为短路可能损坏整流器元件。

(1) to avoid short circuit at the output of the generator, because the short circuit may damage the rectifier components.

(2) 停车前要先卸去负载最后停车, 如果带负载停车, 可能引起失磁, 下次使用时要重新充磁。

(2) Must first load the last stop before parking, if load parking, may cause the loss of excitation, the next time to re magnetization.

(3) 停车后, 磁场变阻器应调至短接位置, 避免下次开车时, 建压困难。

(3) After parking, should adjust rheostat short position, to avoid the pressure when driving difficult.

(五) 故障及其排除

(five) failure and its elimination

发电机经检查接线无误, 但运转后不发遇, 可能的原因及其排除方法好下:

The generator is checked for wiring, but the operation is not met, the possible reason and its elimination method is good:

1、无剩磁, 新安装电机由于位置日久或发电机的带负载下停车等原因失去剩磁, 可以用 12V 蓄电池或干电池对磁场充磁 (+) 端按 F1, (-) 端按 F2, 不可接反。

1. no residual, newly installed motor due to the position of a long period of time or generator with load parking and other reasons lost remanence can with 12V battery or dry battery of the magnetization of the magnetic field (+) end press F1, (-) end press F2, is not reversed

2、转速太低, 不能自激, 用转速表测量后, 提高转速。

2. Speed is too low, can improve the speed of self excitation, with a tachometer measurement after.

3、发遇机的谐波绕组开路或短路, 无三次谐波电压输出, 检查绕组接头或拆换绕组。

3. The harmonic winding of the machine is open or short circuit, and the output of the three harmonic voltage is not.

4、整流元件击穿短路无直流输出, 换整流器。

4. rectifier element breakdown short circuit without DC output, for rectifier

5、磁场绕组短路或开路, 检查磁场绕组接头或更换磁场绕组。

5. Magnetic field winding resistance short circuit or open circuit, check the magnetic field winding connection or the replacement of magnetic field around the resistance

6、电刷和滑环接触不良, 用砂布光滑环表面, 电刷磨损过多, 弹簧压力不够, 更换电刷。

6. Bad contact brushes and slip rings, sand light slip ring surface, brush wear too much, the spring pressure is not enough, the replacement of the brush.

7、接线桩头松动或接触不良, 将桩头螺母旋紧。

7. Pile head connection loose or poor contact, the nut is screwed pile head

8、磁场变阻器未调至短接位置，或接触不良烧断，检查磁场变阻器，并调至短接位置。如电阻丝烧断，应更换磁场变阻器。

8. Field rheostat not tuned to short position, or poor contact burn off, check field rheostat, and transferred to a short position. If the resistance wires are burnt out should be replaced field rheostat

以上故障排除处理后，如发电机建压较困难，可以加适当负载即可帮助建压。

After the above troubleshooting, such as generator building pressure is more difficult, you can add the appropriate load to help build pressure.

(六) 维护及检修

(six) maintenance and repair

1、维护

1, maintenance

(1) 电机储存时应放在干燥地方，若放在泥地上，应该用木料垫高，必须用油布遮盖，以防潮气侵入。

(1) motor storage should be placed in a dry place, if placed in the mud should block up the wood must be covered with a tarp, to prevent moisture intrusion.

(2) 应避免尘垢，水滴、金属碎屑或其他杂物侵入。

(2) Avoid dirt, water, metal detritus and other things.

(3) 在运转时不可将物件覆盖在电机上，以免阻碍散热。

(3) In the operation of the object can not be covered on the motor, so as not to hinder the heat.

(4) 注意不可长时间超载。

(4) Attention should not be overloaded for a long time.

(5) 若发现滑环上有火花及运转时有不正常响声，应随时予以纠正。

(5) Abnormal noise if there is spark and running on the slip ring should be corrected.

(6) 电机不应在水蒸汽、灰尘太多的地方或可燃性气体太多的地方使用。

(6) Motor should not be used in water vapor, dust too many places or too many flammable gases.

(7) 钢珠轴承每经工作 1500 小时后应更换油脂，每年至少一次清除旧油，调换新油，所加油量约占轴承合的一半，不同类型润滑油勿掺杂使用，润滑油可用二硫化钼锂基润滑脂。钢珠轴承温度不超过 95℃。

(7) Ball bearings each after 1500 hours of work should replace the grease, at least annually a clear old oil, replace a new oil, the gas volume of accounts for about half of the bearing, different types of lubrication oil not doping using, lubricating oil available molybdenum disulfide lithium base grease. Ball bearing temperature does not exceed 95 DEG C

2、检修：

2.overhaul

发电机每半年应检修一次。

The generator should be repaired once every six months

(1) 去除窗盖板，如发现电机内积有尘土，应加以清除，最好用压缩空气吹净，压力应不大于 0.4kgf/cm²。

(1) Removal of the window cover, such as the discovery of motor product dust, should be removed, it is best to use compressed air to blow the net, the pressure should be not more than 0.4kgf/cm².

(2) 洁净滑环外盖，检查润滑油是否清洁，如发现色泽不匀，即需要换润滑油。

(2) Clean slip cover, check the oil is clean, as found for Ze unevenness, namely the need for lubricating oil

(3) 拆下轴承外盖，检查润滑油是否清洁，如发现色泽不匀，即需要更换润滑油。

(3) Remove the bearing cover, check whether the oil is clean, if the color is not uniform, that is, the need to replace the lubricating oil.

(4) 检查电刷磨损情况，及恒力弹簧是否变形，电刷磨损过多或恒力弹簧已变形应予更换。

(4) Check the brush wear, and constant spring deformation, brush wear too much or have constant spring deformation should be replaced.

3、检修时的注意事项：

3, the attention of maintenance:

(1) 拆下零件应用盛器妥为保存，不要丢失。

(1) Remove the container parts properly preserved, not lost.

(2) 若拆下线头时，应做好记号，重新安装时应按原位置逐一接上，不要调错。

(2) If you remove the assembly line, you should make a good mark, should be re installed by the original location one by one, do not adjust the wrong.

(3) 拆开轴承盖时轴承和轴承盖部分必须用干净纸张妥为遮掩，勿使尘土飞入。

(3) When the bearing cover is opened, the bearing and the bearing cover must be covered with clean paper.

(4) 安装电刷时应注意准确位置及其与滑环的接触情况良好。

(4) The installation should pay attention to brush contact and the exact location of slip ring is good

(5) 电机安装好后，先用手思思转动转子，检查转动时是否灵活，无杂声。

(5) The motor is installed, first hand thinks the rotation of the rotor, check the rotation is flexible, no noise.

HD 系列无刷交流发电机

HD series brushless AC generator

产品型号定义 Product model definition

H	D	1	1	8	0	1	4
H	D	M	2	0	0	2	4



极数 4
支点数 1为单支点, 2为双支点
发电机功率 KW
1 陆用 M船用
型号 HD

产品特点

Product features

所有绕组采用 H 级漆包线以及 H 级绝缘材料, 并采用特殊的环氧树脂真空浸渍工艺以用防潮、霉、盐雾的黑漆涂处理工艺, 绕组的绝缘等级符合 H 级要求。其绝缘能够防御潮、温、雾、污染物及海洋上的腐蚀性空气。

All windings with class H paint envelope and H class insulation material, and the use of special epoxy resin vacuum impregnation process to moisture, mildew, salt spray black paint coating process, winding insulation level in line with the requirements of the class H. The insulation can defend tide,

temperature, fog, pollutants and marine corrosive air.

任选的永磁发电机 PMG 系统，特别适应于非线性负载和负荷经常变化的场合。

Optional permanent magnet generator PMG system, in particular to the non linear load and load often changing occasions.

发电机能运行于顺时针、逆时针两种方向。

The generator can run in two kinds of direction, which is clockwise and counter clockwise.

单轴承发电机采用国际通用的 SAE 标准联轴器盘片，保证发电机同心对接。对接简单，便于维护。

Single bearing generator using coupling disc SAE international standard, guarantee the generator concentric docking. Docking is simple, easy to maintain

通过 12 个主定子引出线接法改变，可获得 600V 以下的任一种电压。

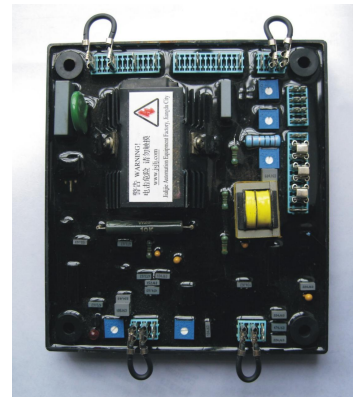
Through the 12 main stator lead wire connection to change, can get any kind of voltage below 600V.

主定子绕组为 2/3 节距，消除了中性电流的三次谐波。定子斜槽一个槽距进一步减少了谐波。所有转子都经过平衡校验。双支点发电机带一个半键校验。

Main stator winding is 2 / 3 section distance, eliminating the third harmonics of the neutral current. A skewed stator slot to further reduce the harmonic. All rotors are after checking a balance. The dual fulcrum generator with a semi check key.

自动支压调节器 (ACR) Automatic pressure regulator (ACR)

HD 系列无刷交流发电机采用先进的自动电压调节器 (AVR)，该调压器稳态、瞬态电压调整率均匀高于国家标准，除调节发电机电压外，还具有低速和无检测信号保护功能以保证对发电机安全可靠的控制，提供远程电压调节器的连接，用户能实现对发电机输出电压更好的调节控制。



HD series brushless AC generator adopts advanced automatic voltage regulation

The voltage regulator steady state, the transient voltage regulation rate is even higher than that of the AVR.National standards, in addition to regulating the generator voltage, but also with low speed and no detection Signal protection function to ensure the safety and reliability of the generator control, to

provide far The user can realize the output voltage of the generator. Good regulation and control.

注意事项 matters needing attention

- 选型表中给出的额定功率基于环境温度 40℃和海拔高度 1000m。
- The rated power of the selection table is based on the ambient temperature of 40 C and altitude 1000m.
- 海拔高度超过 1000m，需工率修正（环境温度 40℃）。
- Elevation of more than 1000m, the rate of correction (ambient temperature of 40 degrees Celsius).
- 不同功充因数功率修正。
- Different power factor correction

现场海高度 m Site sea level	容许功率为额定功率的% Allowable power% of rated power
1000	100
1500	97
2000	94
2500	91
3000	87
3500	82
4000	77
4500	73
5000	69

COS	容许功率为额定功率的% Allowable power% of rated power
0.8-1	100
0.7	96
0.6	92
0.5	91
0.4	90
0.0	88