### HENGFENGYOU ELECTRIC GROUP

PRODUCT CATALOG version 2022-06 FURNACE TRANSFORMER





### ABOUT HENGFENGYOU ELECTRIC

HENGFENGYOU ELECTRIC GROUP, is an electrical enterprise with transmission and distribution industry as its main business, integrating product research and development, manufacturing and trade. Designated suppliers for the world's top 500 enterprises . Its main products include power transformers, medium and low voltage switchgear, distribution panel ,circuit breakers, transmission tower ,Cable and other power distribution equipment .The group has five department: Transformer department, Panel department, power transmission tower department, cable department and electrical engineering department. HENG-FENGYOU ELECTRIC GROUP has been working hard to provide the best transmission, distribution solutions for users all over the world.

#### **Key figures**

#### ·Since: 1990

- · Revenue in 2018: 635 million yuan
- · 550 employees and 30 Electrical Engineers
- ·6 production sites in China
- $\cdot$  6% of revenue is invested in R &D

#### Furnace transformer solutions that drive the global energy transition

With energy demand expanding in both developed and emerging countries, the challenge for HENGFENGYOU Group is to connect energy with people. The group's teams work as closely as possible with projects and decision makers and design and propose technical and process solutions based on global user needs.



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#### HENGFENGYOU ELECTRIC

#### · Business area

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HENGFENGYOU ELECTRIC GROUP designs, manufactures and sells global solutions and equipment for public utilities and private medium and low voltage distribution networks.

Hengfengyou Electric Group's business area is global power distribution equipment demand, fully meet the different power distribution equipment demand of more than 50 countries around the world.

#### Grow business with Hengfengyou

Our goal is to become the world's leading manufacturer of electrical equipment. The business, experience and technology accumulated over the years have benefited customers in more than 50 countries around the world. Once our customers establish a cooperative relationship, they are long-term trusted customers, because HENGFENGYOU ELECTRIC GROUP always insists on providing you with our best electrical products and services.

#### Qingdao Hengfengyou Electrical Engineering Co., Ltd

Smart Electric Global Service provider, Make life better!

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#### •The team energy

The HENGFENGYOU ELECTRIC team achieves synergy within the team to develop and produce specific solutions that meet all customer needs.

Our equipment is designed and researched by R&D services according to each country's electrical standards and helps manage your distribution network for optimal efficiency.

HENGFENGYOU's state-of-the-art production workshop and production equipment will produce high quality products according to your specifications.

HENGFENGYOU ELECTRIC GROUP has a certified quality control laboratory where electrical products are tested out of factory to ensure the reliability and optimal life of our products.

#### Innovative development

For more than 30 years, HENGFENGYOU ELECTRIC GROUP has been designing innovative power distribution solutions to improve network security, optimize facility efficiency and become more environmentally friendly.

Every year, HENGFENGYOU ELECTRIC GROUP spends 6% of its revenue on research and development and innovation of energy saving development of distribution transformers; Intellectualization of distribution boards and substations; Research, development and improvement of transmission tower and cable materials. The R&D division has more than 30 engineers and technicians dedicated to designing and deploying new electrical solutions. Continuously meet the global demand for energy saving and intelligent electrical.

Qingdao International academician port Qingdao MINGSI is introduced as the strategic partner of Technology Co., Ltd. to provide smart power consumption solutions for global users. Through the intelligent monitoring of the Internet of things system, it can realize the remote monitoring, early warning, control and management of enterprise power transmission and distribution equipment and power consumption equipment, and finally achieve the goal of reducing fire accidents, reducing operating costs, and improving enterprise management efficiency.

# HENGFENGYOU ELECTRIC



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### **PRODUCT OVERVIEW**

- Electric furnace transformer is a professional transformer which is planned according to the working principle, load characteristics and operation characteristics of various electric furnaces

Specifically include: steel-making arc furnace transformer, ladle refining furnace transformer, slag furnace transformer, ore heating furnace transformer, frequency furnace transformer and other communication furnace transformer and medium frequency induction furnace transformer, silicon carbide, graphitization furnace transformer and other DC furnace transformer.



- Industrial furnace transformers are mainly divided into three categories: resistance furnace transformers, arc furnace transformers and induction furnace transformers

Hengfengyou furnace transformer production standards: one type is according to the current Chinese standards of production planning of the standard furnace transformer;

The other is a new type of energy-saving electric furnace transformer developed and manufactured on the basis of Chinese standard electric furnace transformer

- Main applications:

· Used for smelting high quality alloy copper and ferroalloy in metallurgical industry

• In the chemical industry, it is used to produce yellow phosphorus, calcium carbide, synthetic resin, etc

· Used for melting cast steel and cast iron in machinery industry

- High reliability of operation verification in more than 50 countries and regions around the world

- Products are mainly sold to East Asia, Central Asia, Southeast Asia, South America, North America and other markets and regions

- Executive standard: IEC 60076 series

### **PRODUCT FEATURE**

#### > Low loss

1) Considering the long-term high load or overload operation of electric furnace transformer, it is different from power transformer. Intentionally increasing the size of iron core and properly increasing the no-load loss in the design can greatly reduce the load loss, thus reducing the total loss of electric furnace transformer and improving the efficiency.

2) Select high-quality copper: the coil copper is made of oxygen free copper, which is manufactured by Luoyang Copper processing plant. Compared with ordinary drawn copper wire, the extruded flat copper wire has the characteristics of smooth surface, no burr, high compactness and low resistivity. Therefore, the load loss of the coil made of this extruded flat copper wire is lower than that of the traditional drawn wire.

3) Selection of high-quality silicon steel sheets: the iron core is made of high-quality cold-rolled oriented grain low loss silicon steel sheets produced by Baowu iron and Steel Co., Ltd., which can properly reduce the no-load loss.

4) Properly increasing the winding turn section and reducing the coil current density can reduce part of the load loss; Properly reducing the magnetic flux density can also reduce the no-load loss, thus reducing the total loss.

#### > low temperature

1) Select a lower current density to reduce the load loss and fundamentally reduce the winding temperature rise and top oil temperature rise of the transformer.



>35kV furnace transformer



>110kV furnace transformer

# **PRODUCT FEATURE**

2) For large capacity transformers, according to the accurate calculation of stray loss, we can eliminate the local overheating of structural parts by electromagnetic shielding or magnetic disconnection according to the location of different transformers.

#### > No leakage

1) Usually, the low voltage and high current outgoing copper bars or tubes of electric furnace transformers are prone to oil leakage. In this regard, after years of research, hengfengyou Electric has developed the patented product "new leakage proof trench filling outlet terminal", which completely solves the problem of oil leakage of low-voltage and high current terminals.



>Leakage proof trench filling outlet terminal for copper bar



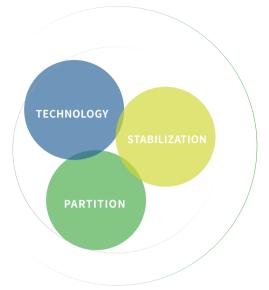
>Leakage proof trench filling outlet terminal for copper pipe

2) Wide steel plate without splicing shall be selected, and the edge of the steel plate shall be cut off during blanking to avoid leakage due to slag inclusion.

3) Sealing: anti corrosion, oil resistance and high elasticity products are used as sealing elements.

4) Welding: internal and external double-layer welding shall be adopted, and the welds shall be strictly inspected by means of flaw detection to ensure no leakage.

5) Components: develop the process of special component test equipment, simulate the on-site operating conditions, and conduct pressure test on vacuum butterfly valve, radiator and other components with hot oil as inspection and screening components.



#### >Strong short-circuit resistance

During the design, dynamic calculation is adopted to assess the dynamic thermal stability of the product: a separate voltage regulating coil is set to ensure the ampere turn balance of high and low voltage coils, and keep the magnetic centers of high voltage, low voltage and voltage regulating coils consistent, so as to minimize the short-circuit voltage and axial and amplitude mechanical forces.

#### >Low noise

Selection of high quality cold rolled grain oriented silicon steel sheet; Laminated with full miter, no hole binding; At the same time, the lamination precision is controlled to the minimum, so that the magnetic resistance of the core is small, and the magnetic leakage is small. The silicon steel sheet adopts georg horizontal shear and longitudinal shear line imported from Germany to fully automatic shear, to ensure that the edge and corner burr is minimized and stray loss is minimized.

#### >Low partial discharge

Study the mechanism and external performance of partial discharge, make targeted adjustment, and invite experts in the industry to discuss, so as to fundamentally solve the causes of partial discharge.

## **TECHNICAL PARAMETERS**

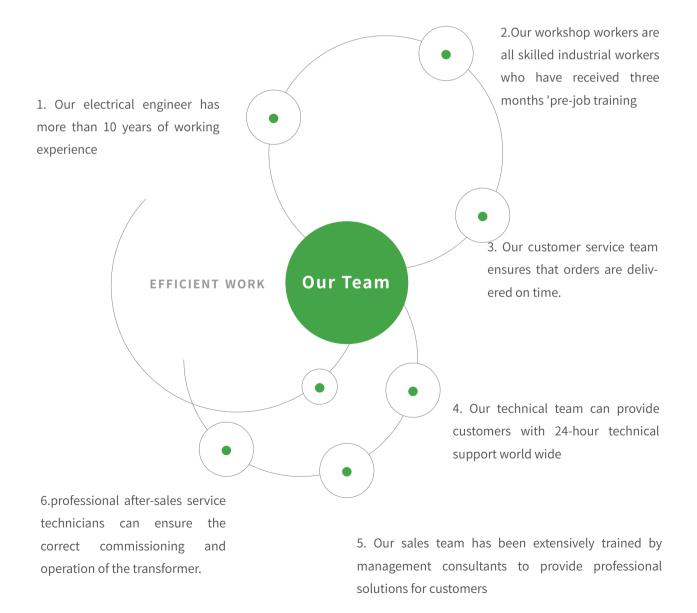
	Rated Power (KVA)	Rated voltoge		connection	weight of product (kg)			dimensions	trock gouge(mm)
NO		first(KV)	second(V)	symbol	body	oil	total	L W H/Lifting height	horizontal /vertical
HJSSP-2400/10	2400	10	180、170、160 104、98、92.5	D-Y、do-11	4200	2200	8500	2600*1800*3000/5000	1070/1070
HJSSP-2800/10	2800	10	190、75、160 110、101、92.5	D-Y、do-11	4800	2500	10000	2700*1900*3300/5500	1070/1070
HJSSP-3200/35	3200	35	210、195、170 121、125、98	D-Y、do-11	6500	3800	12900	3000*1950*3500/5500	1505/1505
HJSSP-4000/10	4000	10	210、195 180、155	D/do	6500	4250	13000	3000*2000*3500/5500	1505/1505
HJSSP-5000/10	5000	10	210、195、180 165、121	D-Y、do-11	7100	4300	13900	3000*2000*3500/5500	1505/1505
HJSSP-6300/35	6300	35	215、200、185 170、155	D/do	9300	6800	18700	3900*2200*4200/6500	1505/1505
HJSSP-7000/10	7000	10	216、202、188 165、121	D/do	10200	7200	19800	4000*2400*3600/5500	1505/1505
HJSSP-7000/35	7000	35	225、212、200 171.5、150	Y/d11	10800	8200	21800	4100*2500*3700/6000	1505/1505
HJSSP-10000/10	10000	10	240、210、180 160、139、121	D-Y、do-11	13500	9600	27600	3600*2900*4000/6500	1505/1505
HJSSPZ-12000/35	12000	35	150-260	Y/d11	16000	10000	32600	4000*2750*4550/7500	1505/1505
HJSSPZ-14000/35	14000	35	13step 160-270	Y/d11	17000	11500	34800	4100*2850*4700/8000	1505/1505
HJSSPZ-15000/35	15000	35	13step 140-280	Y/d11	17800	12300	36000	4200*2900*4750/8500	1505/1505
HJSSPZ-18000/35	18000	35	15step 220-345	Y/d11	21000	13000	40800	4700*3600*4700/8000	2000/2000
HJSSPZ-20000/35	20000	35	13step 230-380	Y/d11	22500	14300	44000	4800*4000*5000/9000	2000/2000
HZDSSPZ-2200/10	2200	10	19step 50-100	110	4100	4700	12800	3100*2400*3300/6500	1505/1505
HZDSSPZ-3150-10	3150	10	27step 68-118	110	5600	4500	14200	3400*2400*3800/7000	1505/1505
HKSSP-2000/10	2000	10	27step 86-71	D/do	4300	2300	8600	2800*1800*3300/4500	1070/1260
HKSSP-2500/10	2500	10	100-84	D/do	4800	2600	9300	2800*1900*3400/4500	1070/1260
HKSSP-3150/10	3150	10	96-76	D/do	5400	3200	10800	3000*2000*3400/4500	1505/1505
HKSSP-4000/10	4000	10	100-78	D/do	6000	4500	13700	3100*2200*3600/5500	1505/1505
HKSSP-5000/10	5000	10	118-94	D/do	7100	5000	15800	3200*2250*3650/5500	1505/1505
HKSSP-6300/10	6300	10	126-100	D/do	8200	6300	18000	3400*2300*3750/6000	1505/1505
HKSSP-8000/10	8000	10		D/do	10200	7700	21800	4000*2500*4200/7000	1505/1505
HKSSP-3150/35	3150	35	128-112	Y/d11	5800	4000	12500	3200*2000*3300/5500	1505/1505
,			108-84					3200*2500*3600/6000	
HKSSP-5000/35	5000	35	120-90	Y/d11	7600	5800	17200		1505/1505
HKSSP-6300/35	6300	35	126-100	Y/d11	9100	7200	19800	3450*2400*4250/6000	1505/1505
HKSSP-10000/35	10000	35	140-112 162-126	D/do	15800	9680	31800	4800*3000*5000/7500	2000/2000
HKSSP-12500/35	12500	35	13step 112-148	D/do	17600	11200	33800	5000*3100*5000/7500	2000/2000
HKSSPZ-10000/35	10000	35	13step 118-162	Y/d11	16500	10000	32500	5000*3100*5000/7500	2000/2000
HKSSPZ-12500/35	12500	35	9step 126-182	Y/d11	17800	11500	34600	5250*3000*5000/8000	2000/2000
HKSSPZ-12500/35	12500	35	19step	Y/d11	21600	13700	41800	5500*3200*4900/8000	2000/2000
HGS-1000/10	1000	10	1050-520	D-Y	2780	1750	5530	2500*1900*2700/5000	820/820
HGS-1600/10	1600	10	1050-520 660-300	D-Y、do-11	3800	2000	6600	2800*2000*2700/5000	1070/1070
HGS-2500/10	2500	10	1050-520 660-300	D-Y、do-11	4750	2100	8000	3000*2200*2800/5000	1070/1070
HGS-3150/10	3150	10	1050-520 660-300	D-Y、do-11	6340	2500	10500	3000*2300*2900/5500	1070/1070
HGS-4200/10	4200	10	1050-520 660-300	D-Y、do-11	7900	3000	12800	3600*2500*3000/6000	1505/1505

## **QUALITY CONTROL**

• HENGFENGYOU has formulated strict workflow and ISO standards to ensure to provide customers with first-class furnace transformer and the best service.

•The HENGFENGYOU team works collaboratively within the team to develop and produce, Furnace transformer solutions that meet all customer needs.

• Our products are designed and studied by R & D services according to the electrical standards of each country and help manage your distribution network for optimal efficiency.



### THE CORNER OF OUR FACTORY

#### CUSTOMER-ORIENTED CREATE VALUE FOR CUSTOMERS



▲ FACTORY DISPLAY

Hengfengyou Electric has 22000 square meters of modern plant, with a monthly delivery capacity of up to 200 Furnace Transformer, and has fully passed the ISO9001, ISO14001, SA8000, BSCI and other market access standards reviewed and issued by international certification bodies. At present, the company has 10 senior engineers, 30 senior technicians and more than 300 employees, with an annual output value of US \$100 million

#### MAKEFRIENDS ALL OVER THE WORLD

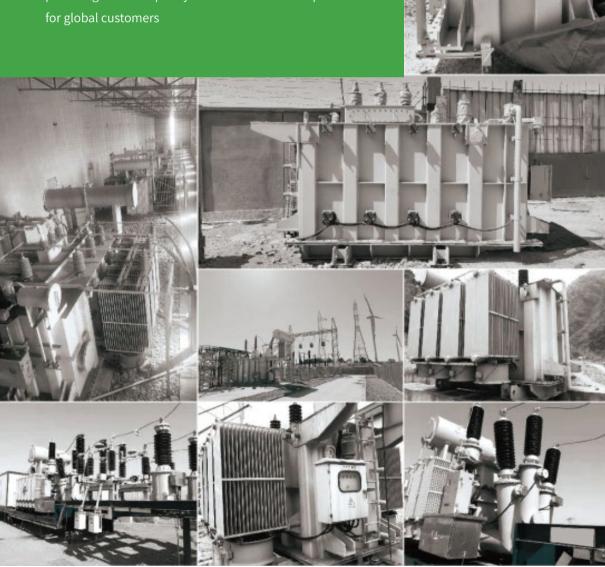


▲ 10KV FURNACE TRANSFORMER



### **CASE SHOW**

Hengfengyou Electric has always been committed to providing the best quality Furnace Transformer products for global customers



# CERTIFICATE

#### QUALIFICATION CERTIFICATION



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#### **OUR HONOR**

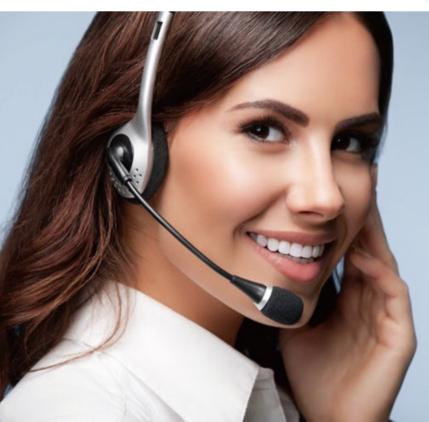


### **PRE-SALE SERVICE:**

- 1.ISO certified excellent Manufacturer
- 2. Third-party authoritative certifications: CE, CB, SASO, CCC, KEMA etc
- 3. Flexible payment: T/T, LC, O/A
- 4. Sufficient inventory, fast delivery time and long validity of the price
- 5. The whole process of picture tracking can be realized in production and transportation
- 6. Experienced professional sales team and a strong technical team
- 7. Sincerely invite customers to visit the company for guidance

### **AFTER-SALES SERVICE:**

- 1. If there is any quality problem after receiving the goods, you can return the goods free of charge or ship new products
- 2. We provide our customers with a 1-year product warranty
- 3. Provide 24-hour, 365-day technical guidance worldwide
- 4. The VIP customers enjoy our promotional activity
- trained by management consultants, is able to provide professional solutions for customers.
- 4. Our technical team is ready for 24-hour technical support worldwide.
- 5. Our customer service team ensures on time delivery.



Call Us For Detais

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青岛恒丰友电气工程有限公司

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