



# **ZHEJIANG JIANGSHAN TRANSFORMER CO., LTD**

**Enterprise Vision: To be the best power equipment supplier in the world.**  
**Enterprise Mission: Provide safe, environmental-friendly, and energy-saving power equipment for global users, satisfy customers, shareholders, employees, suppliers and society.**

An infographic showing a line graph with data points for the years 1979, 1982, 1988, 1994, 2002, 2007, 2009, and 2012. The graph is set against a background of a person walking on sand dunes. The text "Facing the way for more than 40 years. We are now a mature enterprise. In new structure." is at the top.

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# PART 01



## Company Profile

## ZHEJIANG JIANGSHAN TRANSFORMER CO., LTD

Founded in 1969, as a professional manufacturer of power transformers below 230kV, It is listed as one of the domestic manufacturers with large-scale transformer production capacity. The company is a member of China Transformer Industry Association, con honour with civilized enterprise in Zhejiang Province. The company is entitled as national key factory in the industry, also on the list of the first batch of excellent and strong enterprises recommended by the State Economic and Trade Commission for the project of Urban and Rural Power Grid Upgrading, and has been included in the National Thousand Famous Brand Cultivation Project. The company has successively won the titles, like National High-Tech Enterprise, Provincial-level Backbone enterprise of High-Tech Industrial Characteristic for power transmission and transformation equipment, Zhejiang Famous Trademarks, Zhejiang AAA-level Credible and trustworthy Factory, Government Quality Award of Quzhou Government..... etc.

The company is located near Zhejiang-Jiangxi Railway, Hangjinq Expressway, Huangqunan Expressway and National Highway 205. It is only 40 kilometers away from Quzhou Airport. At the same time, with the opening of Hangzhou-Changzhou High-speed Railway, it will be more convenient to reach major cities across the country.



# PART 02

## Development History



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# Development History



○ 1994 Honored as Zhejiang Civilized Unit

○ 1989 Upgraded to National Second-class Enterprise

The first unit 110kV transformer  
○ 1982 was put into operation and connected with State of Grid

○ 1979 Upgraded to Zhejiang Jiangshan Transformer Factory

○ 1969 Jiangshan Transformer Factory was established

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# Development History



- 2013-Now From 2013, the company's business has achieved breakthrough growth with an average annual sales growth of 20%

- 2012 220kV transformer was certified by China National Centre for Quality Supervision and Test of Electrical Apparatus Products including short circuit test.

- 2008 The first unit 220kV transformer was put into operation and connected with State Grid

- 2007 110kV transformer and Dry-type transformer were certified by KEMA

- 2003 Restructured as a subsidiary of Guoguang Technology Group, named as Zhejiang Jiangshan Transformer Co., Ltd.

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# Qualification Documents



Business license

Conscientious



230kV CE certificate

Responsible



110kV CE certificate

Efficient



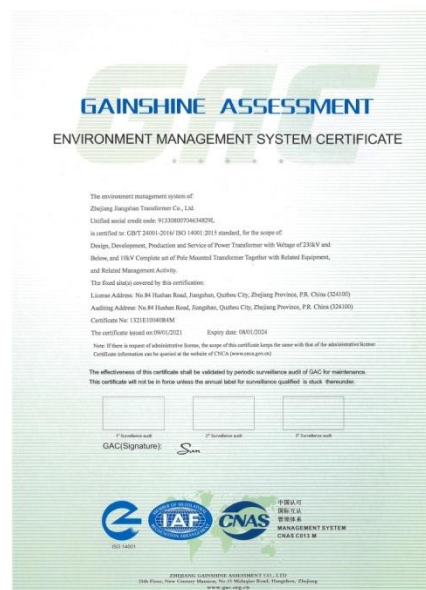
20kV CE certificate

Well-organized



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# Qualification Documents



## ISO certificates

Conscientious

Responsible

Efficient

Careful

Well-organized

2022

# Qualification Documents



实验室名称: 国家电器产品质量监督检验中心  
Lab Name: China National Center for Quality Supervision and Test of Electrical Apparatus Products

№ 20M1148-S

## 型式试验报告 Type Test Report

委托单位: ZHEJIANG JIANGSHAN TRANSFORMER CO., LTD.

Client:

产品名称: Power transformer

Name of Product:

产品型号: SSZ13-240000/220

Product Type:

检验类别: Commission test

Test Category:

本实验室对出具的检验(试验)结果负责, 未经实验室书面同意, 不得部分地复制本报告。

The laboratory is responsible for the inspection (Test) results. The report shall not be reproduced except in full, written approval of the laboratory.

④

DQJC  
China National Center for Quality Supervision and Test of Electrical Apparatus Products  
Test Report

№: 20M1148-S

Total 116 Page 01

Client	ZHEJIANG JIANGSHAN TRANSFORMER CO., LTD.	Test category	Commission test
Manufacturer	ZHEJIANG JIANGSHAN TRANSFORMER CO., LTD.	Date of sample receiving	Jul 24, 2020
Name of sample	Power transformer	Type of sample	SSZ13-240000/220
Address of manufacturer	No. 84 Hushan Road, Jiangshan	Original number or date of production	JS2020-07832
Date of test	From Aug. 05, 2020 to Sep. 29, 2020	Number of sample	1 set
Test items	Routine test Type test (including calculation of the winding hot-spot temperature-rise) Measurement of bushing capacitances and dielectric dissipation factor (tanδ) Line terminal AC withstand test Measurement of frequency response Short-circuit withstand test Measurement of no-load excitation characteristics Long-duration no-load test Measurement of zero-sequence impedances on three-phase transformers Measurement of the harmonics of the no-load current Measurement of radio interference Determination of transient voltage transfer characteristics Measurement of ratio difference and angle difference of built-in current transformer Excitation characteristic measurement of built-in current transformer Bushing dielectric loss-temperature characteristics test	Test standards	GB/T 1094.1—2013 GB/T 1094.2—2013 GB/T 1094.3—2017 GB/T 1094.5—2008 GB/T 1094.10—2003 GB/T 6451—2015 GB/T 7595—2017 JB/T 10088—2016 IEC 60076-1:2011 IEC 60076-2:2011 IEC 60076-3:2013+AMD1:2018 IEC 60076-5:2006 IEC 60076-10:2016 Commission requirements
Test conclusion	The test results of routine test, type test (including calculation of the winding hot-spot temperature-rise), measurement of bushing capacitances and dielectric dissipation factor (tanδ), line terminal AC withstand test, measurement of frequency response, short-circuit withstand test, measurement of no-load excitation characteristics, long-duration no-load test, measurement of zero-sequence impedances on three-phase transformers, measurement of the harmonics of the no-load current, measurement of radio interference, determination of transient voltage transfer characteristics, measurement of ratio difference and angle difference of built-in current transformer, excitation characteristic measurement of built-in current transformer and bushing dielectric loss-temperature characteristics test of power transformer (type: SSZ13-240000/220) are in accordance with test standards and commission requirements. The sample has passed the test.		
Remarks	Note: the conclusion is valid only for the inspected and tested sample. Submittal date: 2020-09-29		

Compiled by: [Signature] Proofread by: [Signature] Checked by: [Signature] Approved by: [Signature]  
SJ13-YB1

DQJC

Test Report	China National Center for Quality Supervision and Test of Electrical Apparatus Products	№: 20M1148-S Total 116 Page 02
1. Sample parameters Rated power: 24000/240000/120000kVA Rated voltage: 220/121/68.8kV Rated current: 629.9/145.2/1799.6A Rated frequency: 50Hz Number of phases: 3 Tapping range: (220 ± 8 × 1.25%)/121/68.8kV Connection symbol: Yyn0d11 Cooling method: ONAN Class of insulation and heat-resistant: / Insulation level: HV $U_w/U_L/L/LIC/AC$ 252/170/90/50/10/50/39.8kV HVN $U_w/U_L/AC$ 126/400/200kV MVN $U_w/U_L/LIC/AC$ 126/480/230/200kV MVN $U_w/U_L/AC$ 72.5/325/140kV LV $U_w/U_L/LIC/AC$ 40.5/200/220/8kV		
2. Test standards GB/T 1094.1—2013 Power transformers—Part 1: General GB/T 1094.2—2013 Power transformers—Part 2: Temperature rise for liquid-immersed transformers GB/T 1094.3—2017 Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air GB/T 1094.5—2008 Power transformers—Part 5: Ability to withstand short-circuit GB/T 1094.10—2003 Power transformers—Part 10: Determination of sound levels GB/T 6451—2015 Technical parameters and requirements of oil-immersed power transformer GB/T 7595—2017 Quality of transformer oils in service JB/T 10088—2016 Sound levels for 630–1000kV power transformers IEC 60076-1:2011 Power transformers – Part 1: General IEC 60076-2:2011 Power transformers – Part 2: Temperature rise for liquid-immersed transformers IEC 60076-3:2013+AMD1:2018 Power transformers – Part 3: Insulation levels, dielectric tests and external clearances in air IEC 60076-5:2006 Power transformers – Part 5: Ability to withstand short-circuit IEC 60076-10:2016 Power transformers – Part 10: Determination of sound levels Commission requirements		
3. Sample description The power transformer is for outdoor use and the structure of the coil is round type concentric type coil. The type used in this report meets the requirements of JB/T8387—2016 Identification method of transformer's product type and external photos of the sample have been attached.		

SJ13-YB2

(11)

DQJC

Test Report	China National Center for Quality Supervision and Test of Electrical Apparatus Products	№: 20M1148-S Total 116 Page 03
Photos of the sample  		

SJ13-YB3

(11)

## DQJC Type test report of 220kV 240MVA Power Transformer

Conscientious

Responsible

Efficient


Careful

Well-organized

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# Qualification Documents



DNV·GL	
KEMA INSPECTION REPORT	
	3033-16
<b>Object</b>	Three phase auto-transformer
<b>Designation</b>	OSFPSZ-200000/230 <b>Serial No.</b> 399151201
	230 / 121 / 10,5 kV – 502,0 / 954,3 / 5498,6 A – 50 Hz
<b>Client</b>	Zhejiang Jiangshan Transformer Co., Ltd., Jiangshan, China
<b>Manufacturer</b>	Zhejiang Jiangshan Transformer Co., Ltd., Jiangshan, China
<b>Inspected by</b>	KEMA Nederland B.V., Arnhem, The Netherlands
<b>Test location</b>	Zhejiang Jiangshan Transformer Co., Ltd., Jiangshan, China
<b>Date of tests</b>	12 to 27 April 2016
<b>Test specification</b>	The routine tests have been carried out based on IEC 60076-1 (2011) and IEC 60076-3 (2013). Test procedure and test parameters were in accordance with client's instruction. The type and special tests have been carried out in accordance with IEC 60076-1 (2011), IEC 60076-2 (2011), IEC 60076-10 (2001) and client's requirements.
<b>Remarks</b>	The difference between mean voltage and R.M.S voltage was larger than 3% at 110% of the rated voltage. Client didn't specify the guaranteed value for no-load loss and current at 110% of the rated voltage. During the IVPD test, the test voltage and one hour PD measurement voltage were lower than the required value in the subclause 7.3.3.1 of IEC 60076-3 (2013), which was a client's instruction. The object passed the tests.
This report applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer.	
This report consists of 76 pages in total.	
	
J.P. Fonteinje Executive Vice President KEMA Laboratories	
KEMA Laboratories Arnhem, 3 June 2016	
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1 IDENTIFICATION OF THE OBJECT TESTED	
1.1 Ratings/characteristics of the object tested	
Rated voltages	230 / 121 / 10,5 kV
Rated frequency	50 Hz
Rated current	502,0 / 954,3 / 5498,6 A
1.2 Description of the object tested	
Manufacturer	Zhejiang Jiangshan Transformer Co., Ltd.
Type	OSFPSZ-200000/230 three phase auto-transformer
Serial number	399151201
Year of manufacture	2016
Insulation	Paper/oil
Rated voltage	230 / 121 / 10,5 kV
Tapping range	121 +6/-6 x 2,0 % kV
Highest voltages HV / MV / LV	252 / 126 / 12 kV
HVN	72,5 kV
Switching impulse	Lightning impulse/CW source
High voltage winding (HV)	620 kV 750/825 kV 325 kV
Middle voltage winding (MV)	- 480/530 kV 230 kV
Low voltage winding (LV)	- 75/83 kV 35 kV
HV neutral point	- 325/- kV 140 kV
Rated power OFAF	200 / 200 / 100 MVA
Vector Group	(5 groups of coolers and 5 oil pumps were put into operation, each group of cooler includes 2 fans)
Cooling type	YNad11
Terminals	OFAF HV: A, B, C MV: Am, Bm, Cm LV: a, b, c Neutral: N
The transformer was tested with radiators and conservator. Photographs of the transformer under test are presented in chapter 7.	

## KEMA Type test report of 230kV 200MVA Power Transformer

Conscientious

Responsible

Efficient

Careful

Well-organized



# 2022

# Qualification Documents



**KEMA**

Report.

Report number 07-62307A  
Project number 70755010  
Apparatus Power Transformer 31,5 MVA  
Client SVET.CTQC  
Test location SVET.CTQC, Shenyang, P.R. China  
Manufacturer Zhejiang Jiangshan Transformer Co., Ltd.

Arnhem, 21 May 2007

**KEMA**

**INSPECTION REPORT**

Report number 70755010-TDT 07-62307A  
Client SVET.CTQC  
Shenyang Hunan New & High-Tech. Industrial Development Zone  
Shenyang 110179  
China  
Reference Trust testing  
Concerning Routine, type and special tests  
Date Between 19 and 30 March 2007  
Place Shenyang, China  
Object Power Transformer 31,5 MVA  
Manufacturer Zhejiang Jiangshan Transformer Co., Ltd.

**REQUIREMENTS**  
Requirements as specified in the standards IEC 60076-1, IEC 60076-2, IEC 60076-3, IEC 60076-5 and IEC 60076-10.

**TEST PROGRAMME**  
The programme was specified by the client.  
For the programme we refer to page 3.

**SUMMARY AND CONCLUSION**  
The results obtained relate only to the work ordered and to the material tested.  
Deviations were found with respect to the following points:  
The client did not require the PD measurement during the short duration AC withstand voltage test, and it was omitted conform sub clause 12.1 of IEC 60076-3.  
For the other points examined the requirements specified were met.

KEMA Nederland B.V.  
Author G.J. Veldscholten  
This report consists of:  
86 pages incl. 9 annexes (73 pages)

P.G.A. Bus  
KEMA T&D Testing Services  
Managing Director  
Arnhem, 21 May 2007

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Utrechtseweg 310, 6812 AR Arnhem. Telephone +31 26 3 56 22 85. Telefax +31 26 4 46 17 26

**KEMA**

-2- 70755010-TDT 07-62307A

**MATERIAL DATA**

Manufacturer Zhejiang Jiangshan Transformer Co., Ltd.  
Type SZ11-M-31500/110  
Serial number 281070201  
Rated power 31500 kVA  
Rated voltage 110/ 10.5 kV  
Rated current 165.3/ 1732.1 A  
Rated frequency 50 Hz  
Number of phases 3  
Tapping range +10%, -10%  
Number of steps/ tapping step 17/ 1.25%  
Vector group YNd11  
Cooling method ONAN  
Temperature class of insulation A  
Insulation levels h.v. terminal : LI/LIC/AC – 480/530/200 kV  
h.v. neutral : LI/AC – 325/140 kV  
l.v. terminal : LI/LIC/AC – 75/85/35 kV  
10.5 % at 75 °C  
Short-circuit impedance  
Total mass 54000 kg

**TEST OBJECT IDENTIFICATION**

The test object was identified by checking the rating plate and the serial number.  
During the untanking operation the test object was checked with the drawings enclosed in the SVET.CTQC report, nr. CTQC/B-07.124.  
The SVET.CTQC test report regarding tests, oscillograms, curves, lists of test equipments, test circuits and manufacturer drawings are enclosed in this report as annex I.

**KEMA**

-3- 70755010-TDT 07-62307A

**TEST PROGRAMME**

	kind of test <sup>1)</sup>	standard/ specification	clause
0 INSPECTION OF THE TEST SET-UP			
1 ROUTINE-, AND SPECIAL TESTS BEFORE SHORT-CIRCUIT TEST			
1.1 Measurement of insulation resistances, absorption ratio and tan δ	S	IEC 60076-1	10.1
1.2 Measurement of winding resistance	R	IEC 60076-1	10.2
1.3 Measurement of voltage ratio and check of voltage vector relationship	R	IEC 60076-1	10.3
1.4 Separate source AC withstand voltage test	R	IEC 60076-3	5.11
1.5 Short duration AC withstand voltage test	R	IEC 60076-3	5.12
1.6 Measurement of load loss and short-circuit impedance	R	IEC 60076-1	10.4
1.7 Measurement of no-load loss and current	R	IEC 60076-1	10.5
1.8 Tests on on-load tap changer	R	IEC 60076-1	10.8
2 SHORT-CIRCUIT TEST	S	IEC 60076-5	
3 REPEAT OF ROUTINE TESTS, SPECIAL- AND TYPE TESTS			
3.1 Measurement of insulation resistances, absorption ratio and tan δ	S	IEC 60076-1	10.1
3.2 Measurement of winding resistance	R	IEC 60076-1	10.2
3.3 Measurement of voltage ratio and check of voltage vector relationship	R	IEC 60076-1	10.3
3.4 Separate source AC withstand voltage test	R	IEC 60076-3	5.11
3.5 Lightning impulse test (inclusive chopped on the tail)	T	IEC 60076-3	13, 14
3.6 Short duration AC withstand voltage test	R	IEC 60076-3	5.12
3.7 Measurement of load loss and short-circuit impedance	R	IEC 60076-1	10.4
3.8 Measurement of zero sequence impedance	S	IEC 60076-1	10.7
3.9 Measurement of no-load loss and current	R	IEC 60076-1	10.5
3.10 Measurement of the harmonics of the no-load current	S	IEC 60076-1	10.6
3.11 Determination of sound levels	S	IEC 60076-10	
3.12 Tests on on-load tap changer	R	IEC 60076-1	10.8
3.13 Temperature-rise test	T	IEC 60076-2	
3.14 Tests on transformer oil		Requirement	
3.15 Inspection of the active part	S	IEC 60076-5	4.2

<sup>1)</sup> R = routine test T = type test S = special test

## KEMA Type test report of 110kV 31.5MVA Power Transformer

Conscientious

Responsible

Efficient

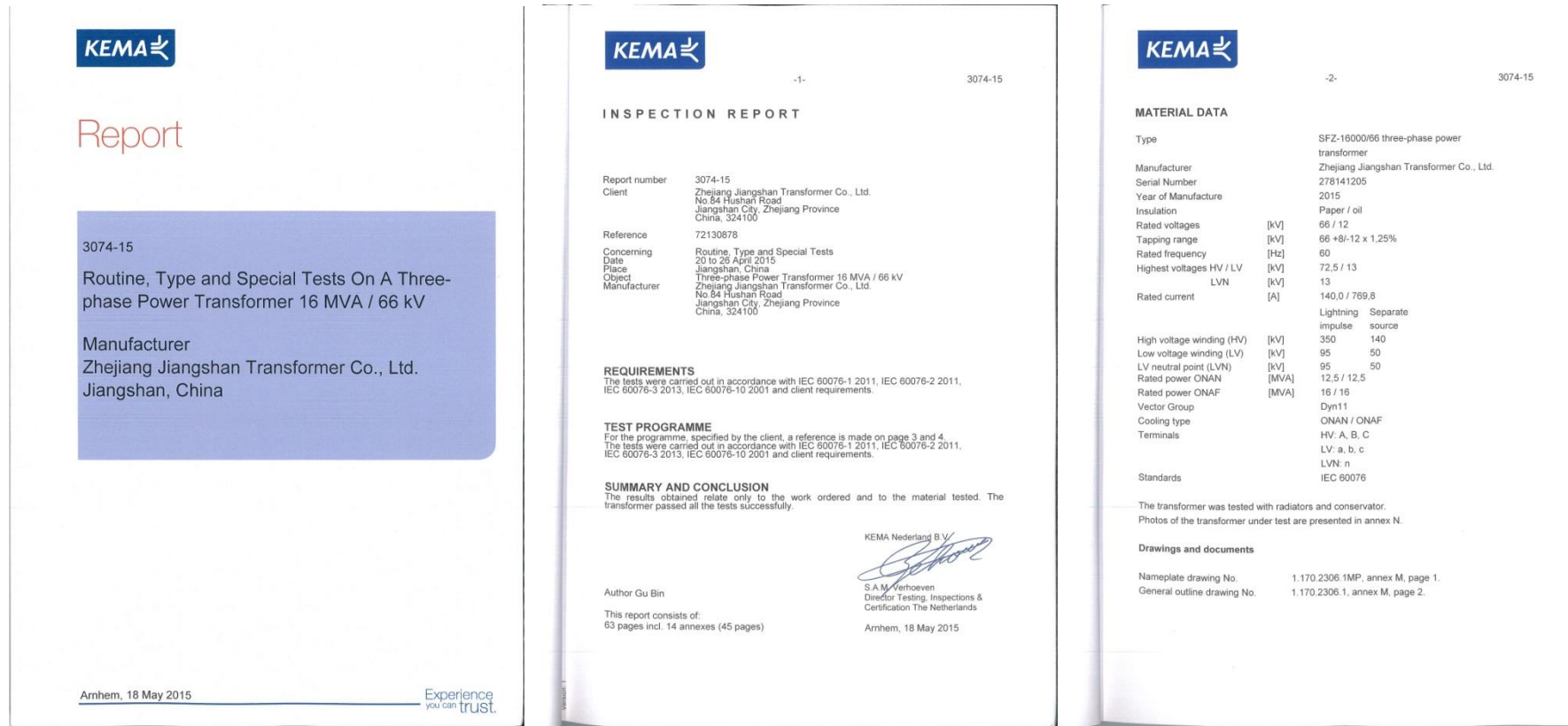
Careful

Well-organized



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# Qualification Documents



## KEMA Type test report of 66kV 16MVA Power Transformer

Conscientious

Responsible

Efficient

Careful

Well-organized

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# Qualification Documents



KEMA		KEMA		KEMA	
Report		INSPECTION REPORT		MATERIAL DATA	
3073-15		Report number 3073-15		Type SFZ-16000/33 three-phase power transformer	
Routine, Type and Special Tests On A Three-phase Power Transformer 16 MVA / 33 kV		Client Zhejiang Jiangshan Transformer Co., Ltd. No 84 Hushan Road Jiangshan City, Zhejiang Province China, 324100		Manufacturer Zhejiang Jiangshan Transformer Co., Ltd.	
Manufacturer Zhejiang Jiangshan Transformer Co., Ltd. Jiangshan, China		Reference 72130878		Serial Number 178141217	
		Concerning Routine, Type and Special Tests		Year of Manufacture 2015	
		Date 20 to 28 April 2015		Insulation Paper / oil	
		Place Jiangshan, China		Rated voltages [kV] 33 / 12	
		Object Three-phase Power Transformer 16 MVA / 33 kV		Tapping range [kV] 33 +8/-12 x 1,25%	
		Manufacturer Zhejiang Jiangshan Transformer Co., Ltd. No 84 Hushan Road Jiangshan City, Zhejiang Province China, 324100		Rated frequency [Hz] 60	
				Highest voltages HV / LV [kV] 36 / 13	
				LVN [kV] 13	
				Rated current [A] 279,9 / 769,8	
				Lightning impulse Separate source	
				High voltage winding (HV) [kV] 200 70	
				Low voltage winding (LV) [kV] 95 50	
				LV neutral point (LVN) [kV] 95 50	
				Rated power ONAN [MVA] 12,5 / 12,5	
				Rated power ONAF [MVA] 16 / 16	
				Vector Group Dyn11	
				Cooling type ONAN / ONAF	
				Terminals HV: A, B, C LV: a, b, c LVN: n	
				Standards IEC 60076	
				The transformer was tested with radiators and conservator. Photos of the transformer under test are presented in annex N.	
				Drawings and documents	
				Nameplate drawing No. 1.710.2308.1MP, annex M, page 1.	
				General outline drawing No. 1.710.2308.1, annex M, page 2.	

## KEMA Type test report of 33kV 16MVA Power Transformer

Conscientious

Responsible

Efficient

Careful

Well-organized



# PART 03



## Company Structure

2022

# Company Structure



Union

General Manager

General Manager

Deputy General Manager

Party committee

Research Institute

Design department

Design department I  
Design department II

Financial department

Finance Department  
Transportation Department

Marketing

China Area / Foreign market  
Performance Department / Comercial Department

Management Department

Human resource Department  
Information Department / Resources Department

Production department

Sourcing Department / Technology Department  
Power transformer / Distribution transformer

Quality department

Quality Control Department  
After- Service Department / Test Center



# PART 04



**Intelligent Manufacturing**

2022

# Intelligent Manufacturing



## Large transformer core automatic cross-cutting production line

- ◆ Automatic full sequence material handling
- ◆ Controllable shearing
- ◆ Intelligent management of equipment condition and equipment protection



## Automatic core laminating system

- ◆ Automatic lamination, high precision and high stability
- ◆ 2 iron core synchronised laminations
- ◆ Comprehensive efficiency 1 hour/set

2022

# Intelligent Manufacturing



## Automatic core transportation system

- ◆ Automatic core transfer and turning
- ◆ Automatic return and sort of empty trays



## Automatic feeding system of column material warehouse and laminating machine

- ◆ Automatic completion of column material transfer
- ◆ Automatic warehousing and storage management
- ◆ Automatic distribution of column material
- ◆ Automatic return of empty material plate



2022

# Intelligent Manufacturing



## Intelligent storage and logistics system

- ◆ Connecting all stages of production
- ◆ Fully automatic intelligent distribution and storage of workshop materials
- ◆ Improve the efficiency of workshop logistics operation and optimize warehouse location management



## Intelligent stereo warehouse with material

- ◆ Intelligent sorting, timing and quantitative distribution
- ◆ Automatic material matching and binding of material information
- ◆ Automatic storage and management of material information

2022

# Intelligent Manufacturing



## Automatic oil tank surface treatment and spraying system

- ◆ Automatic operation
- ◆ Accurately adjust temperature and speed
- ◆ Automatic 14-step surface treatment of tanks



## Flowline vacuum oiling system

- ◆ Fully automatic operation of vacuum pumping and oil injection
- ◆ 16 oil injection ports are operated synchronously and efficiently



2022

# Intelligent Manufacturing



200T Crane



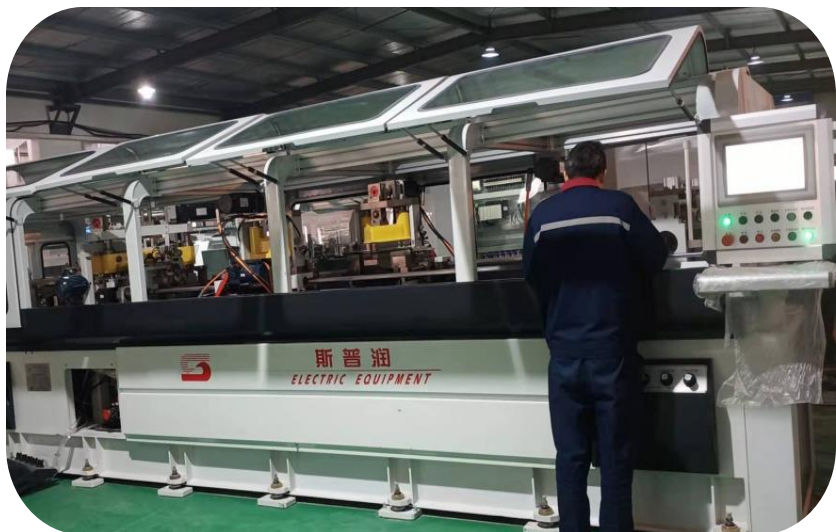
Automatic winding  
machine



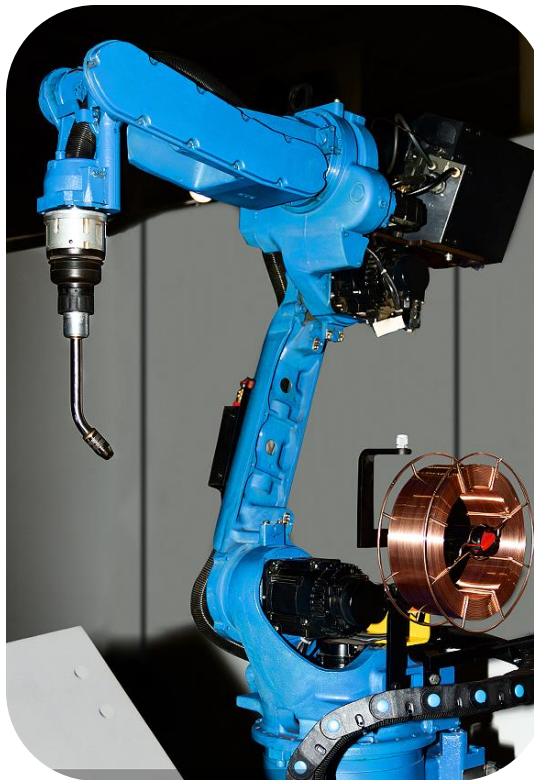
CNC hydraulic  
plate bending  
machine

2022

# Intelligent Manufacturing



400mm CNC high-speed cross-cutting shearing line



Automatic welding robot



Vacuum Casting Machine



2022

# Intelligent Manufacturing



4000W CNC laser  
cutting machine



12000W CNC  
laser cutting  
machine



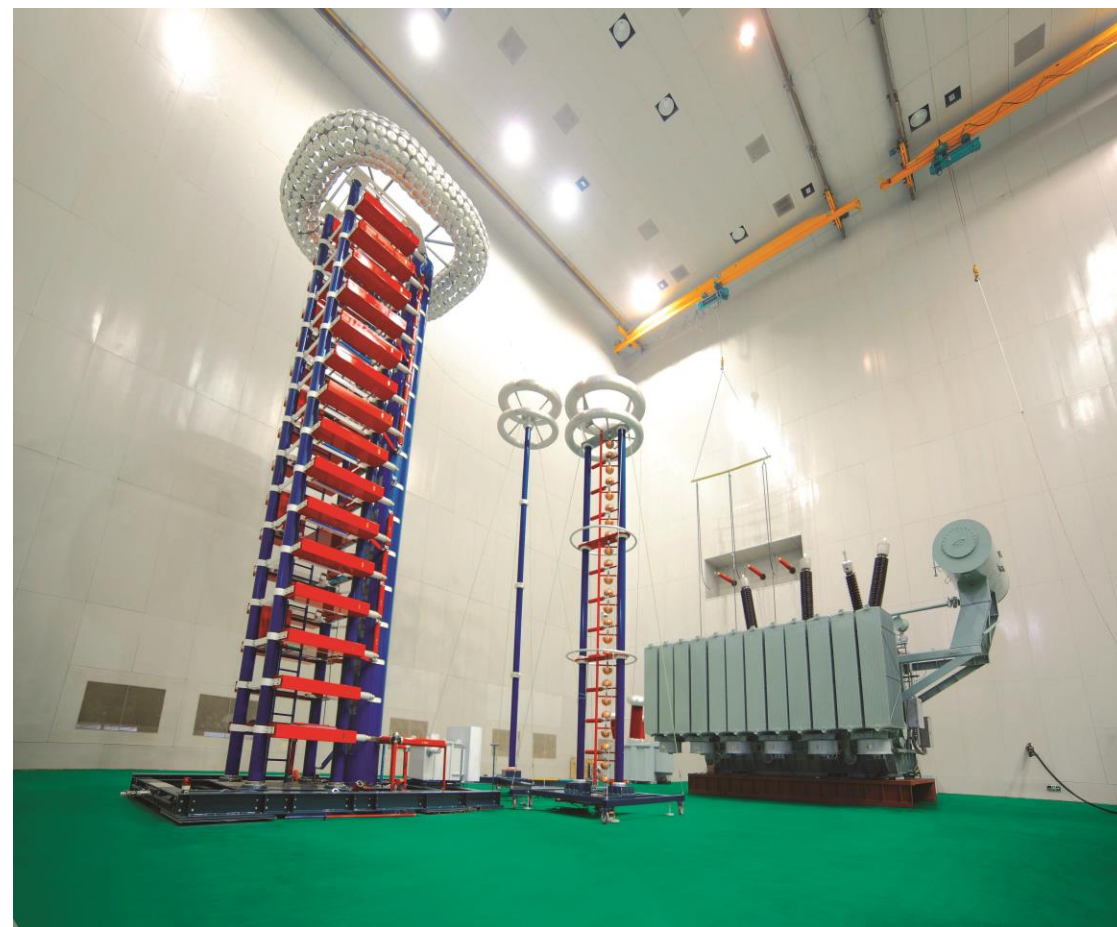
3000W fiber laser  
tube cutting  
machine

2022

# Intelligent Manufacturing



Transformer Intelligent Test System



Test hall



# PART 05



## Product Introduction

2022

# Product Introduction



- Scientific calculation method.
- Reasonable structure layout.
- Advanced technological measures.
- Excellent quality assurance system.
- SSZ13-240000/220kV transformer has passed type test including short circuit tests.

## Product Range:

220kV Double winding power transformer with off circuit tap changer  
220kV Double winding power transformer with on load tap changer  
220kV Three-winding power transformer with off circuit tap changer  
220kV Three-winding auto transformer with off circuit tap changer  
220kV Three-winding power transformer with on load tap changer  
220kV Three-winding auto transformer with on load tap changer, etc.

## 220kV Oil-Immersed Power Transformer



2022

# Product Introduction



**132kV Oil-Immersed Power Transformer**

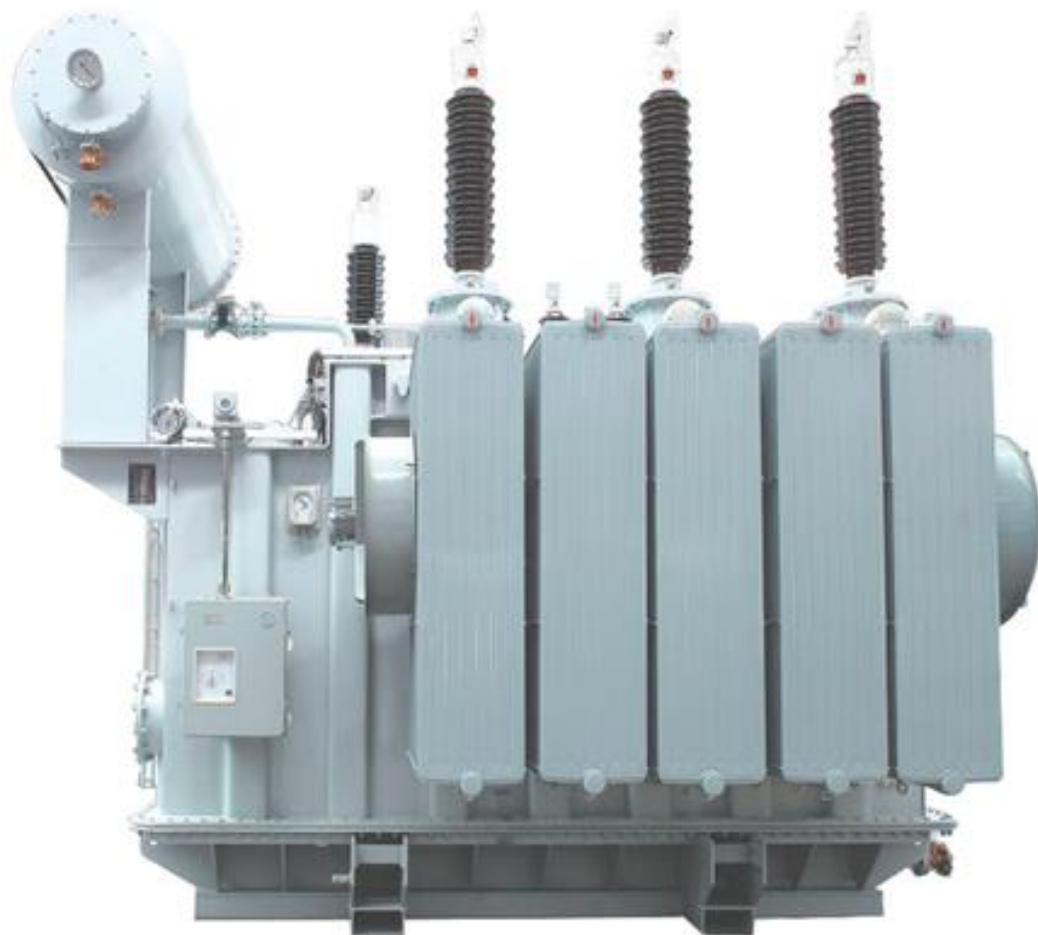
- The core of 110kV power transformer is made of high-quality CRGO(Cold rolled grain oriented) silicon steel.
- It has the characteristics of low loss, low noise, and strong anti short-circuit capability.
- It has been widely used in various substations and power plants, and receives good feedback from the users.
- The SZ11-63000/132kV transformer has passed type test including short circuit test.
- The SZ11-31500/110kV transformer has been certified by KEMA.

## Product Range:

132kV Double winding power transformer with off circuit tap changer  
132kV Double winding power transformer with on load tap changer  
132kV Three-winding power transformer with off circuit tap changer  
132kV Three-winding power transformer with on load tap changer  
66kV double-winding power transformer with off circuit tap changer  
66kV double-winding power transformer with on load tap changer, etc.

2022

# Product Introduction



## Oil-Immersed Dual Voltage Power Transformer

- The core of dual voltage power transformer is made of high-quality CRGO(Cold rolled grain oriented) silicon steel.
- It is convenient, one transformer, two voltage system .
- Wildly used in many markets, JSB has sold to many countries, voltage ranged from 220(110), 138(69)kV, 132 (88) kV and 69(34.5) kV.
- Well Recommended by many users.

### Product Range:

220-110kV Double winding power transformer with off circuit tap changer

220-110kV Double winding power transformer with on load tap changer

138-69kV Double winding power transformer with off circuit tap changer

138-69kV Double winding power transformer with on load tap changer

132-88kV Double winding power transformer with off circuit tap changer

132-88 kV Double winding power transformer with on load tap changer, etc.

2022

# Product Introduction



- The 35kV series transformer has the advantages of low loss, low noise, strong short circuit withstand ability and beautiful appearance.
- The 33kV 28MVA power transformer has passed type test of STL Lab---ASTA, UK.
- The 35kV energy-saving transformer has passed the joint appraisal of new product from the National Machinery Industry Bureau and the State Grid Company.

Product range:

50-1600/35kV Series three-phase double-winding distribution transformer with off circuit tap changer.

630-40000/35kV Series three-phase double-winding power transformer with off circuit tap changer.

35kV double-winding power transformer with off circuit tap changer.

35kV double winding power transformer with on load tap changer, etc.

## 35kV Transformer

2022

# Product Introduction



- Amorphous alloy core has low coercivity, ultra-low loss, low excitation current and good temperature stability. It is a green and environmental friendly high-efficiency energy-saving transformer.
- The core adopts three-phase four-frame five-column structure.
- The vector group of Dyn11 is beneficial to reduce the influence of harmonics in the power grid and improve the quality of power supply.
- The tank uses sealed structure, which is reliable and maintenance-free.
- No-load loss is about 65% lower than S11 CRGO distribution transformer and about 50% lower than S13 CRGO distribution transformer, especially suitable for rural grids and areas with low loading.

**10kV Oil-Immersed Amorphous Alloy Distribution Transformer**

Product Range:  
S(B)H15-M-(30-2500)/10kV series three-phase amorphous alloy transformer, etc.



2022

# Product Introduction



- The S13 energy-saving transformer is made of high-quality and high-magnetic-permeability silicon steel sheets, by using laminated traditional core technology and optimizing design, no-load loss is reduced by 27% on average compared to S11. It is the latest generation of energy-saving products, only after amorphous alloy transformers.
- High cost performance.
- The product is suitable for areas such as industrial and mining enterprises, residential communities, urban and rural grids.

Product Range:  
S13-M series three-phase double-winding distribution transformer, etc.

**10kV S13 Series Oil-Immersed Fully Sealed Distribution Transformer**

2022

# Product Introduction



- Using advanced electromagnetic design software
- Conforming to performance meets IEC60076, GB1094, GB/T6451, GB/T25289-2010 standards.
- Without oil conservator, air breather and other devices, the distribution transformer coil adopts high-strength enameled wire (or paper-covered wire) winding, with even ampere-turn distribution, reasonable insulation structure and strong anti short-circuit capability.
- No need to do untanking for the transformer, and the gaskets are made of high-quality acrylic rubber, which can effectively prevent light aging and thermal aging.

Product Range:  
S11-M series three-phase double-winding distribution transformer, etc.

**10kV S11 Series Oil-Immersed Fully Sealed Distribution Transformer**

2022

# Product Introduction



## 10kV Fully Sealed Toroidal Core Transformer

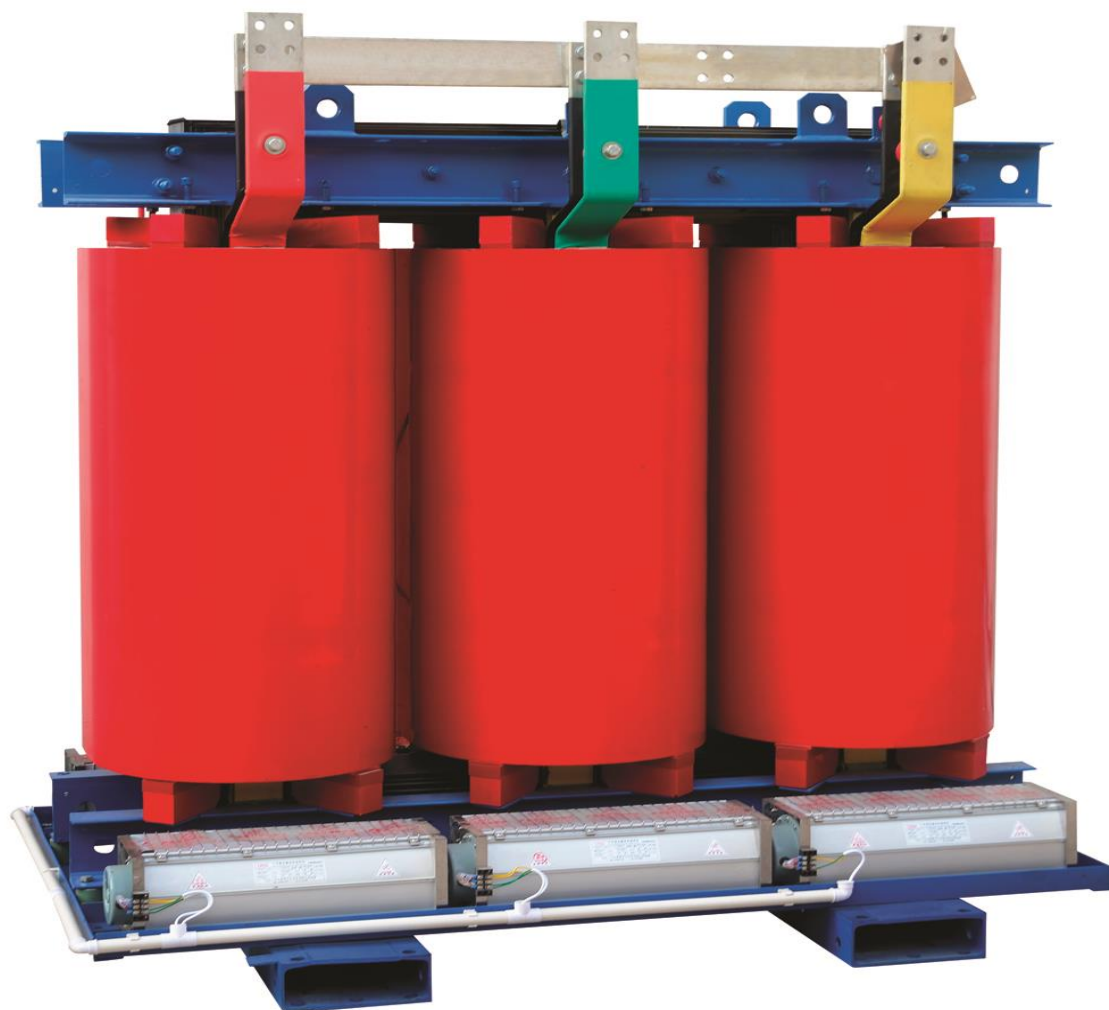
- The oil-immersed three-dimensional toroidal core distribution transformer has the advantages of low loss and low noise. It is a new generation of high-tech, high-performance, energy-saving and environmental friendly product. It is widely used in power supply and distribution systems.
- The iron core is wound into shape, without cutting, no air gap, and large filling factor
- The iron core is annealed.
- The iron core has no joints, which greatly reduces the magnetic resistance and reduces the no-load current by 60-80%.
- Continuous winding makes full use of the orientation of silicon steel sheet, reducing no-load loss by 20-30%.
- The wound core itself is a seamless whole, and the structure is compact, and the noise is reduced by more than 10dB.
- Compact structure, the floor area of the active part is reduced by 10-15% , the height by 10-20%. If installed inside the pad-mounted transformer, the whole space could save 25%.

Product Range:

S13-M.RL-10kV series three-dimensional toroidal core distribution transformer, etc.

2022

# Product Introduction



## F Class Cast Resin Dry-Type Transformer

- **Good heat dissipation, the coil does not absorb moisture, neither pollutes the environment, it can be installed in the loading center.**
- **Low noise, low loss, significant energy saving effect, economical operation, and maintenance-free.**
- **High mechanical strength, high insulation strength, and strong anti short-circuit capability.**
  - **Excellent flame retardancy, explosion-proof, and outstanding disaster prevention performance.**
- **Low loss, small size, light weight and easy installation.**

### Product Range:

Epoxy cast resin 10kV-35kV class distribution transformer with off circuit tap changer

Epoxy cast resin 10kV-35kV class distribution transformer with on load tap changer

Epoxy cast resin 10kV-35kV class rectifier transformer

Epoxy cast resin 10kV-35kV photovoltaic and wind power transformer

Epoxy cast resin 10kV-35kV class combined excitation transformer

Epoxy cast resin 0.4kV-10kV isolation transformer, etc.



2022

# Product Introduction



- Ultra-low loss, compared with CRGO type dry transformer, no-load loss is reduced by more than 70%, no-load current is reduced by about 80%, energy saving, and high power efficiency.
- Low noise, better than national standards, can be installed in residential areas and other places with higher requirements.
- High mechanical strength, high insulation strength, and strong anti short-circuit capability.
  - Low operating temperature, slow insulation aging, and long service life.
- Small size, light weight, easy to install.

Product Range:  
SCBH15 series epoxy cast resin 10kV-35kV grade amorphous alloy transformer

## Amorphous Alloy Dry-Type Transformer

2022

# Product Introduction



- The iron core is made of high-quality cold-rolled oriented silicon steel sheet, with a 45° full oblique seam five-step stepping center column positioning stacking method, and the core column is bound with glass fiber tape to reduce the no-load loss, no-load current and noise.

- The inner and outer windings are made of high-quality copper wire to enhance the insulation between layers or sections. The vacuum drying process is adopted. The formed winding has the characteristics of good electrical performance, high mechanical strength, and small partial discharge.

- In addition to the arc suppression coil, the grounding transformer can also be equipped with a secondary load, which can replace the station transformer, thereby saving investment and substation space. The product has the characteristics of small size, beautiful appearance and maintenance-free.

Product Range:

10kV class capacity 30-2500kVA oil-immersed grounding transformer (with secondary)

20kV class capacity 30-2500kVA oil-immersed grounding transformer (with secondary)

35kV class capacity 30-2500kVA oil-immersed grounding transformer (with secondary)

66kV class 30-2500kVA oil-immersed grounding transformer (with secondary)

## Oil-Immersed Grounding Transformers

2022

# Product Introduction



- The product is Class H (180°C), and the main insulation material is Class C (220°C), with strong overloading capacity and long-time operation of 120% of the rated capacity.
- Does not support combustion during the usage, can be flame retardant, do not explode and release toxic gases, neither cause harm to the environment, other equipment and human .
- There is no partial discharge and no possibility of "cracking" in operation.
- After the life span, the insulating material and the copper wire can be easily separated and recycled without polluting the environment.

Product Range:

Impregnated H-class insulated 10kV-class distribution transformer

Impregnated H-class insulated 35kV-class distribution transformer

**H Class Impregnated Dry-Type  
Transformer**



2022

# Product Introduction



- Fully insulated structure and interlocking device to ensure personal safety.
- Fully sealed structure, eradicate oil deterioration and prolong service life.
  - The load switch has the characteristics of three linkages, which effectively reduces the ferromagnetic resonance.
  - Using double fuse protection to ensure simple, convenient, economical, reliable and safe operation of the system.
  - There are choices, like silicon steel sheet iron cores, amorphous alloy cores, rolled iron cores, etc., with low loss, low noise, and no heat generation in the cabinet.
  - The high-voltage incoming line adopts an elbow cable plug, which can operate 200A load current, and can be operated as a load switch in an emergency, and has the characteristics of an isolating switch.
  - Small size, only about 1/3 of the same capacity European style combined transformer.

## Combined Transformer



- ZB type prefabricated substation is commonly known as European type transformer. As a new type of power supply and distribution device, it has many advantages over traditional substations.

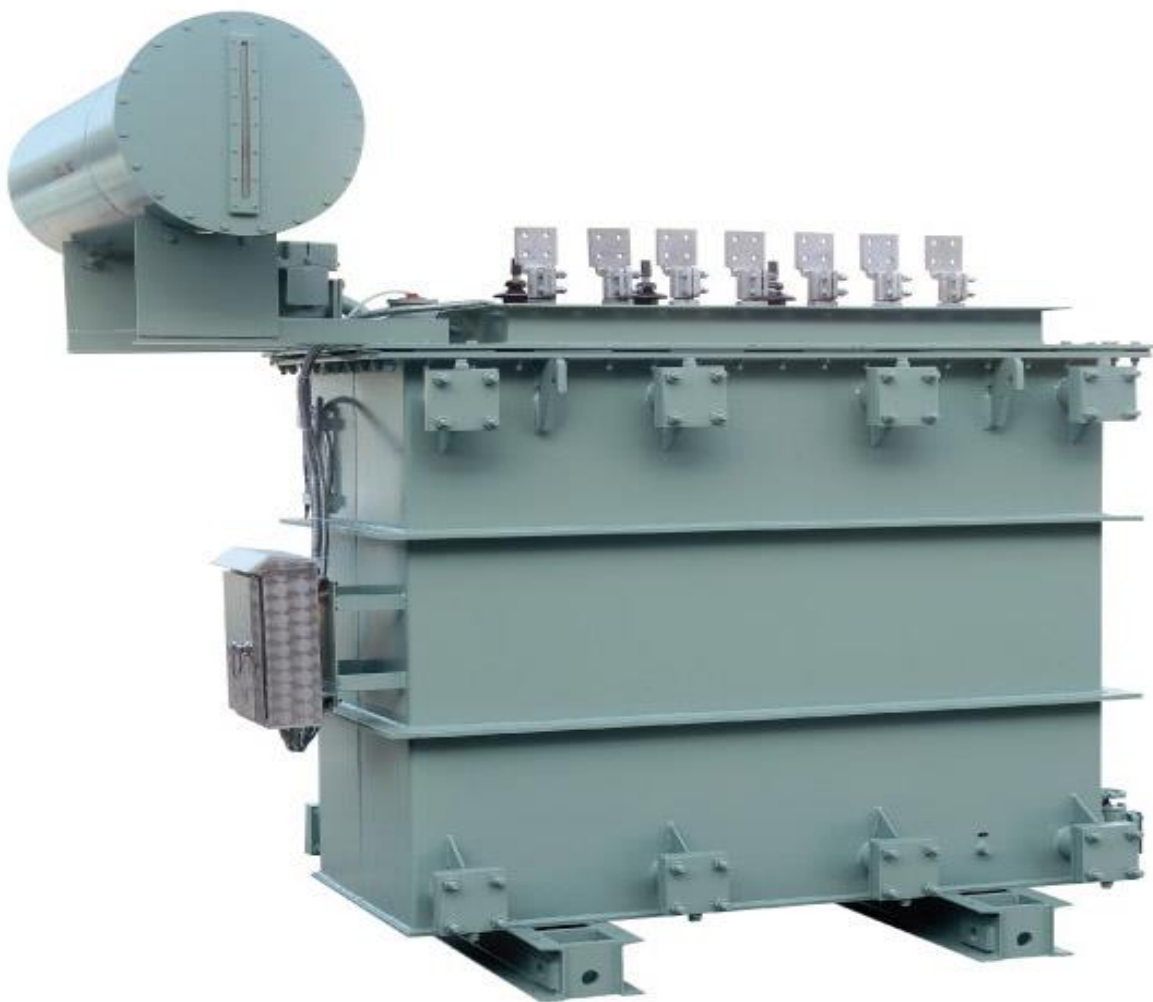
- Because of its small size, compact structure and easy relocation, it greatly shortens the construction and also reduces the costs; at the same time, the substation is simple to install on-site and put into service quickly, and equipment maintenance is easy, without human on duty. It is often used in the loading center, and can improve the quality of power supply, reduce power loss, enhance the grid reliability, and upgrade the distribution grid.

- It is composed of high-voltage switchgear, low-voltage distribution panel, distribution transformer and the cabinet. The HV side has air, vacuum or SF6 load switches; the transformer could be dry-type transformer or oil transformer. The cabinet has good heat radiation and ventilation structure, beautiful appearance, it also has air ducts for upper and lower ventilation, and the temperature rise caused by outdoor solar radiation can be reduced to a minimum limit. A temperature-controlled forced ventilation device and an automatic temperature control device can be used inside.

- Each independent unit is equipped with complete control, protection, live display and lighting system.

2022

# Product Introduction



**Rectifier (capacity adjustment)  
transformer**

●The rectifier transformer has absorbed the successful experience of the same industry in china and abroad, and has developed various models of products to meet different customer requirements. Products are single-phase, three-phase, three-phase five-column, six-phase and twelve-phase. The technical performance of the product is on the domestic advanced level. Products of various structures can be designed and customized according to various special requirements of customers.

●Main production technology and features:

1. High-performance CRGO and high-quality oxygen-free copper wires are used in materials, and advanced coil phase separation overall package technology is adopted.
2. The iron core adopts five-stage step-by-step stacking method, lead cold-press welding technology, and precision machining of tank sealing surface.



2022

# After-sales Service



## Quick response

After receiving the customer's request, we will call back within 4 hours. Service personnel arrive at the domestic project site within 24 hours and arrive at the foreign project site within one week

## Technical Training

Our technical engineers can provide equipment operation, debugging and maintenance training according to customer requirements

## Technical support

Our power transformer project department will arrange experienced technicians to carry out installation instructions on site and provide necessary assistance

## Maintenance guidance

During the warranty period, we will repair and replace the product or its parts free of charge

# PART 06



**Sales Reference**

2022

# Sales reference



On-site installation supervision  
for State Grid of China



**PETE Syria**  
**230kV 125MVA power transformer**



2022

# Sales reference



**SJSC "Uzbekenergo" Uzbekistan  
220kV 200MVA Obi-Hayot Substation in  
Namangan region**



**Western Africa  
220kV 70MVA Cote d'Ivoire-Liberia-Sierra  
Leone- Guinea Interconnection Project (CLSG)**



2022

Sales reference



Iraq 132kV 120MVA power transformer



Bangladesh 132kV 75MVA power transformer

2022

# Sales reference



**Nepal Electricity Authority  
132kV 63MVA power transformer**



**Trinidad & Tobago Electricity Commission  
66kV 130MVA power transformer**



2022

# Sales reference



Canada 138kV 33.3MVA power transformer



Bolivia 115kV 50MVA power transformer



2022

# Sales reference



Georgia 110kV 40MVA power transformer



Shaanxi Geopower 110kV 31.5MVA power transformer



2022

# Sales reference



Albania 115kV 31.5MVA power transformer



Ecuador 69kV 32MVA power transformer



2022

Sales reference



China Southern Power Grid  $\pm 800$  kV UHV Suidong Converter Station  
Expansion Project



2022

# Sales reference



**Rwanda**  
**HV Dual Voltage Transformer**  
**220-110/33kV 20MVA**



**Uzbekistan**  
**HV Dual Voltage Transformer**  
**220-110/35kV 63MVA**



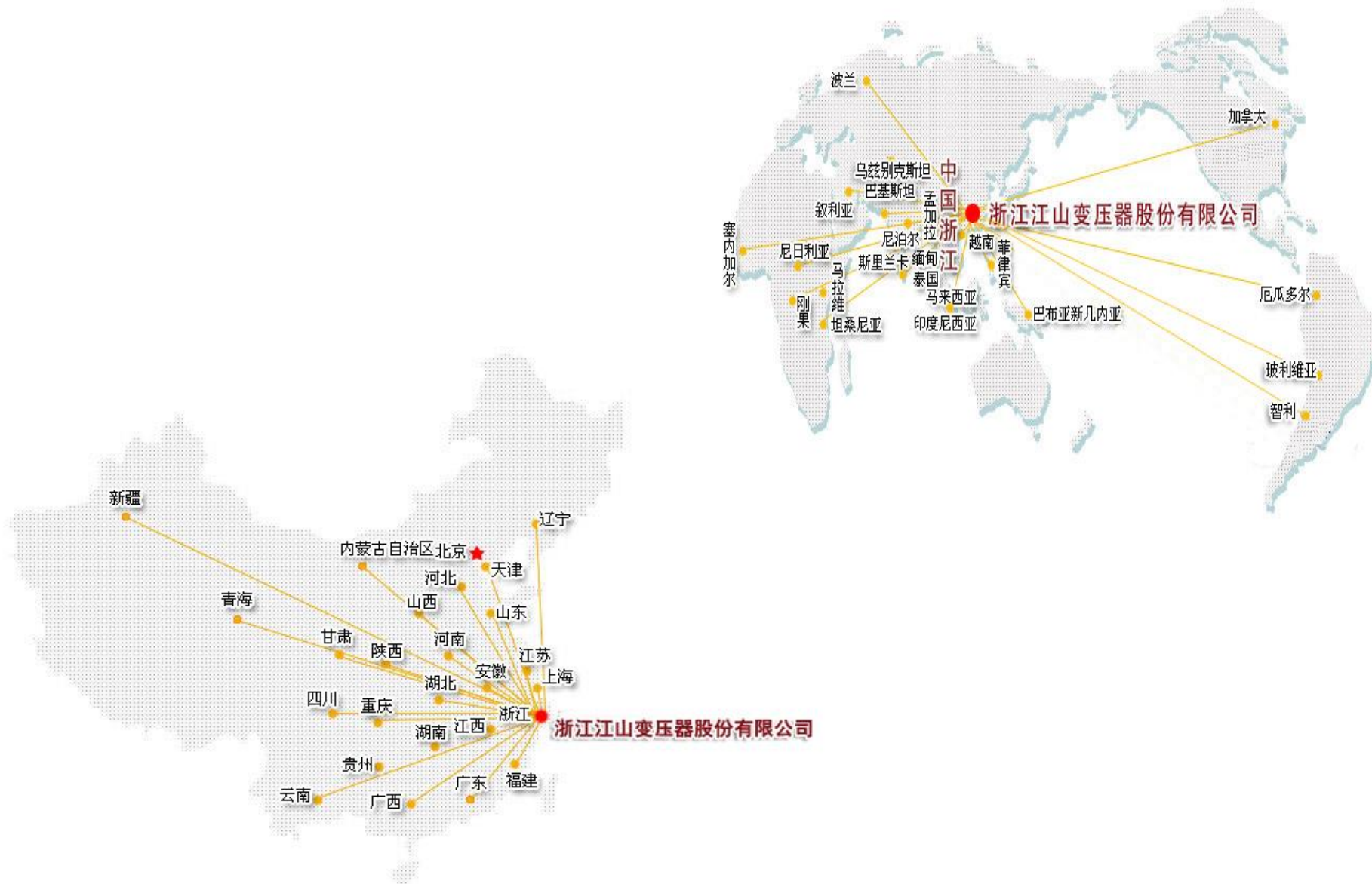
2022

# Business Distribution



**Sales network all over the world**

**The products sell well all over the countries and are exported to more than 50 countries over the world including South America, North America, Europe, Africa, Asia..... and so no.**





# PART 07



**Company Culture**

2022

# Company Culture



The company conducts after-sales training for Syrian client

**Support  
each other**

**Improve  
together**



The company launches training about effective management



2022

# Company Culture



The commendation for excellent staff and excellent team

Encourage Learning



Grow together



The company launches effective management execution training



2022

# Company Culture



Company Annual Party

**Thanks for  
being with us  
all the way**



The company holds a fun sports event



**Thank you for  
watching**

**ZHEJIANG JIANGSHAN TRANSFORMER  
CO., LTD**

**JSB®**