



认证证书

国瑞华自电力设备有限公司

统一社会信用代码： 91330382MA2HB3PX3C

注册地址：浙江省温州市乐清市柳市镇外向型工业区

生产/经营地址：浙江省温州市乐清市柳市镇外向型工业区车站路398号-18

环境管理体系

符合标准：**GB/T 24001-2016/ISO 14001:2015**

认证范围： 高低压成套开关设备、干式变压器、油浸式变压器的组装和销售（资质许可范围内）

初次注册日期： 2021-04-19

发放/改版日期： 2024-04-25

注册编号： KC103H8076-1E

失效日期： 2027-04-18

第一次
年监合格
贴标有效

第二次
年监合格
贴标有效

获证组织必须定期接受监督审核并经审核合格，此证书方继续有效。

以贴在证书上的合格标签表明通过监督审核。

开成认证公司（CNCA-R-2016-215，地址：上海市杨浦区宁国路313弄7号602室）依据国家认证认可监督管理委员会准则及上海开成认证有限公司认证规则规定，发放此证书

本证书信息可在国家认证认可监督管理委员会官方网站（www.cnca.gov.cn）上查询

证书有效状态可登录（www.shkcrz.com）查询。



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签发人

上海开成认证有限公司

中国上海市杨浦区宁国路313弄7号602



Certificate of Registration

Guorui Huazi Power Equipment Co., Ltd

ABN: 91330382MA2HB3PX3C

Registered address: Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province

Production / Business address: 398-18 Chezhan Road, Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province

Environmental Management System

which complies with the requirements of:

GB/T 24001-2016/ISO 14001:2015

The registration covers Assembly and sales of high and low voltage complete switchgear, dry type transformers, and oil immersed transformers (within the scope of qualification permit)

Original Certification: 2021-04-19
Issue/Revised Date: 2024-04-25

Registration No: KC103H8076-1E
Expiry Date: 2027-04-18

1st
Surveillance

2nd
Surveillance

The certified organization must regularly receive supervision and audit and passed the examination and approval. This certificate will continue to be valid. The qualified label attached to the certificate indicates that the audit has been approved. Kaicheng Certification Company (CNCA-R-2016-215, Address: Room 602, No. 7, Lane 313, Ningguo Road, Yangpu District, Shanghai) issued this certificate according to the rules of CNCA and the rules of certification of Shanghai Certification Company. The certificate can be verified on CNCA's web site at www.cnca.gov.cn. Certificate valid status can query at www.shkcrz.com



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signer:

Shanghai Kaicheng Certification Co., Ltd.
Room 602, No. 7, Lane 313, Ningguo Road, Yangpu District, Shanghai, China 021-62500175



认证证书

国瑞华自电力设备有限公司

统一社会信用代码: 91330382MA2HB3PX3C

注册地址: 浙江省温州市乐清市柳市镇外向型工业区

生产/经营地址: 浙江省温州市乐清市柳市镇外向型工业区车站路398号-18

质量管理体系

符合标准: **GB/T 19001-2016/ISO 9001:2015**

认证范围: 高低压成套开关设备、干式变压器、油浸式变压器的组装和销售 (资质许可范围内)

初次注册日期: 2021-05-14

发放/改版日期: 2024-04-25

注册编号: KC104G7105-1Q

失效日期: 2027-05-13

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获证组织必须定期接受监督审核并经审核合格, 此证书方继续有效。

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开成认证公司 (CNCA-R-2016-215, 地址: 上海市杨浦区宁国路313弄7号602室) 依据国家认证认可监督管理委员会准则及上海开成认证有限公司认证规则规定, 发放此证书

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中国上海市杨浦区宁国路313弄7号602



Certificate of Registration

Guorui Huazi Power Equipment Co., Ltd

ABN: 91330382MA2HB3PX3C

Registered address: Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province

Production / Business address: 398-18 Chezhan Road, Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province

Quality Management System

which complies with the requirements of:

GB/T 19001-2016/ISO 9001:2015

The registration covers Assembly and sales of high and low voltage complete switchgear, dry type transformers, and oil immersed transformers (within the scope of qualification permit)

Original Certification: 2021-05-14

Issue/Revised Date: 2024-04-25

Registration No: KC104G7105-1Q

Expiry Date: 2027-05-13

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signer:

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国瑞华自电力设备有限公司

统一社会信用代码: 91330382MA2HB3PX3C

注册地址: 浙江省温州市乐清市柳市镇外向型工业区

生产/经营地址: 浙江省温州市乐清市柳市镇外向型工业区车站路398号-18

职业健康安全管理体系

符合标准: **GB/T 45001-2020 /ISO 45001:2018**

认证范围: 高低压成套开关设备、干式变压器、油浸式变压器的组装和销售(资质许可范围内)

初次注册日期: 2021-04-19

发放/改版日期: 2024-04-25

注册编号: KC103H8076-1S

失效日期: 2027-04-18

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开成认证公司(CNCA-R-2016-215, 地址: 上海市杨浦区宁国路313弄7号602室)依据国家认证认可监督管理委员会准则及上海开成认证有限公司认证规则规定, 发放此证书

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Certificate of Registration

Guorui Huazi Power Equipment Co., Ltd

ABN: 91330382MA2HB3PX3C

Registered address: Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province

Production / Business address: 398-18 Chezhan Road, Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province

Safety Management System

which complies with the requirements of:

GB/T 45001-2020 /ISO 45001:2018

The registration covers Assembly and sales of high and low voltage complete switchgear, dry type transformers, and oil immersed transformers (within the scope of qualification permit)

Original Certification: 2021-04-19

Issue/Revised Date: 2024-04-25

Registration No: KC103H8076-1S

Expiry Date: 2027-04-18

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Shanghai Kaicheng Certification Co., Ltd.
Room 602, No. 7, Lane 313, Ningguo Road, Yangpu District, Shanghai, China 021-62500175



ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION CERTIFICATE

BeiAn Electric Co., Ltd.

Registered Address: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

Business Location: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

Production Address: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

**The Environmental Management System Conforms to the Standard
GB/T24001-2016/ISO14001:2015**

Certified Scope

Production and related management activities of high-voltage switchgear, box type substations, and low-voltage switchgear within the qualification scope

Unified Social Credit Code: 91330382307658704X

Registration No.:04325E30714R1S24

First Issuing Date:29 Apr. 2022

Issuing Date: 27 Apr. 2025

Expiration Date: 28 Apr. 2028

Issued By :

Wu Jiarong

Beijing United Intelligence Certification Co., Ltd.



中国认可
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管理体系
MANAGEMENT SYSTEM
CNAS C043-M



The certified organisation should accept regular surveillance, if the surveillance are qualified, the certification will sustain effective.
Address: 17/F Building 3 (Triumph Center), 170 Beiyuan Road, Chaoyang Dist, Beijing P.R.China Tel: 010-84850008 Website: www.uicc.com
This certification information can be queried on the CNCA official website (www.cnca.gov.cn)



QUALITY MANAGEMENT SYSTEM CERTIFICATION CERTIFICATE

BeiAn Electric Co., Ltd.

Registered Address: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

Business Location: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

Production Address: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

**The Quality Management System Conforms to the Standard
GB/T19001-2016/ISO9001:2015**

Certified Scope

Production of high-voltage switchgear, box type substations, and low-voltage switchgear within the scope of qualifications

Unified Social Credit Code: 91330382307658704X

Registration No.:04325Q30851R1S24

First Issuing Date:29 Apr. 2022

Issuing Date: 27 Apr. 2025

Expiration Date: 28 Apr. 2028

Issued By :

Wu Jiarong

Beijing United Intelligence Certification Co., Ltd.



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This certification information can be queried on the CNCA official website (www.cnca.gov.cn)



OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATION CERTIFICATE

BeiAn Electric Co., Ltd.

Registered Address: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

Business Location: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

Production Address: No. 268 Wei 16th Road, Yueqing Economic Development Zone, Yueqing City, Zhejiang Province

**The Occupational Health and Safety Management System Conforms to the
Standard**

GB/T45001-2020/ISO45001:2018

Certified Scope

Production and related management activities of high-voltage switchgear, box type substations, and low-voltage switchgear within the qualification scope

Unified Social Credit Code: 91330382307658704X

Registration No.:04325S40679R1S24

First Issuing Date:29 Apr. 2022

Issuing Date: 27 Apr. 2025

Expiration Date: 28 Apr. 2028

Issued By :

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检测
TESTING
CNAS L1020



实验室名称: 苏州电器科学研究院股份有限公司
国家电器产品质量检验检测中心

Lab Name: Suzhou Electrical Apparatus Science Research Institute Co., Ltd.
China National Center for Quality Inspection and Test of Electrical
Apparatus Products

No 25N0783-S

型式试验报告 Type Test Report

委托单位: 国瑞华自电力设备有限公司

Client: Guorui Huazi Power Equipment Co., Ltd.

产品名称: 干式变压器

Name of Product: Dry-type transformer

产品型号: SCB14-2000/10-NX2

Product Type:

检验类别: 型式试验

Test Category: Type test

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.

Test Report

№: 25N0783-S

Total 42 Page 01

Client	Guorui Huazi Power Equipment Co., Ltd.	Test category	Type test
Manufacturer	Guorui Huazi Power Equipment Co., Ltd.	Date of sample receiving	Aug. 1, 2025
Name of sample	Dry-type transformer	Type of sample	SCB14-2000/10-NX2
Address of manufacturer	Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province	Original number or date of production	202507025
Date of test	From Aug. 6, 2025 to Aug. 8, 2025	Number of sample	1 set
Test items	Routine test Type test Measurement of no-load loss and current at 90% and 110% of rated voltage Power evaluation on transformer Measurement of the harmonics of the no-load current Short-circuit withstand test	Test standards	GB/T1094.1—2013 GB/T1094.3—2017 GB/T1094.5—2008 GB/T1094.10—2022 GB/T1094.11—2022 GB/T10228—2023 GB20052—2024 JB/T10088—2016 IEC60076-1:2011 IEC60076-3:2013+AMD 1:2018 IEC60076-5:2006 IEC60076-10:2016 IEC60076-11:2018 Commission requirements
Test conclusion	<p>The test results of routine test, type test, measurement of no-load loss and current at 90% and 110% of rated voltage, power evaluation on transformer, measurement of the harmonics of the no-load current and short-circuit withstand test of the dry-type transformer (type: SCB14-2000/10-NX2) are in accordance with test standards and commission requirements. The sample has passed the above tests.</p> <p>Measured parameters of no-load and load losses of the sample meet requirements of energy efficiency grade 2 of GB 20052—2024.</p> <p style="text-align: right;">Signing and issuing date: 2025.08.12</p> <p>Note: the conclusion is valid only for the inspected and tested sample.</p>		
Remarks	/		

SJJ-GB001

Compiled by:

Proofread by:

Checked by:

Approved by:

Test Report	Suzhou Electrical Apparatus Science Research Institute Co., Ltd.	№: 25N0783-S Total 42 Page 02						
<p>1. Sample parameters</p> <p>Rated power: 2000kVA</p> <p>Rated voltage: 10/0.4kV</p> <p>Rated current: 115.5/2886.8A</p> <p>Rated frequency: 50Hz</p> <p>Number of phases: 3</p> <p>Tapping ranges: $\pm 2 \times 2.5\%$</p> <p>Connection symbol: Dyn11</p> <p>Cooling method: AN</p> <p>Thermal class of insulation: F</p> <table border="0"> <tr> <td>Insulation level: HV</td> <td>$U_m/LI/AC$</td> <td>12/75/35kV</td> </tr> <tr> <td>LV</td> <td>U_m/AC</td> <td>$\leq 1.1/5kV$</td> </tr> </table> <p>2. Test standards</p> <p>GB/T 1094.1—2013 <i>Power transformers—Part 1: General</i></p> <p>GB/T 1094.3—2017 <i>Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air</i></p> <p>GB/T 1094.5—2008 <i>Power transformers—Part 5: Ability to withstand short circuit</i></p> <p>GB/T 1094.10—2022 <i>Power transformers—Part 10: Determination of sound levels</i></p> <p>GB/T 1094.11—2022 <i>Power transformers—Part 11: Dry-type transformers</i></p> <p>GB/T 10228—2023 <i>Technical parameters and requirements for dry-type power transformers</i></p> <p>GB 20052—2024 <i>Minimum allowable values of energy efficiency and the energy efficiency grades for power transformers</i></p> <p>JB/T 10088—2016 <i>Sound level for 6kV~1000kV power transformers</i></p> <p>IEC 60076-1:2011 <i>Power transformers—Part 1: General</i></p> <p>IEC 60076-3:2013+AMD 1: 2018 <i>Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air</i></p> <p>IEC 60076-5:2006 <i>Power transformers—Part 5: Ability to withstand short circuit</i></p> <p>IEC 60076-10:2016 <i>Power transformers—Part 10: Determination of sound levels</i></p> <p>IEC 60076-11:2018 <i>Power transformers—Part 11: Dry-type transformers</i></p> <p>Commission requirements</p> <p>3. Sample description</p> <p>The dry-type transformer meets the requirements of GB/T 1094.11—2022 and is for indoor use. The structure of LV winding which is made of copper foil is non-circular concentric type. External photos of the sample have been attached.</p>			Insulation level: HV	$U_m/LI/AC$	12/75/35kV	LV	U_m/AC	$\leq 1.1/5kV$
Insulation level: HV	$U_m/LI/AC$	12/75/35kV						
LV	U_m/AC	$\leq 1.1/5kV$						



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方圆电气检测



报告查询
No.23133B40591Y

TEST REPORT

检验报告

NAME OF SAMPLE _____ Power transformer

MODEL _____ SZ22-20000/35-NX1

CUSTOMER _____ Guorui Huazi Power Equipment Co., Ltd

TEST CATEGORY _____ Type Test




ZHEJIANG FANGYUAN TEST GROUP CO., LTD.

ZHEJIANG FANGYUAN ELECTRICAL EQUIPMENT TESTING CO., LTD.

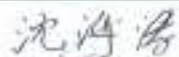
NATIONAL CENTER OF QUALITY INSPECTION FOR ELECTRICAL SAFETY (ZHEJIANG)

NATIONAL CENTER OF QUALITY INSPECTION FOR ELECTRICAL SAFETY (ZHEJIANG)

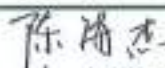
TEST REPORT

Product	Power transformer	Test Category	Type Test
Model	SZ22-20000/35-NX1	Serial No.	23041881
Client	Guorui Huazi Power Equipment Co., Ltd	Manufacturer	Guorui Huazi Power Equipment Co., Ltd
Client's address	No. 398, Chezhan Road, Yueqing City, Zhejiang Province	Manufacturer's address	No. 398, Chezhan Road, Yueqing City, Zhejiang Province
Sample (s) Deliverer	Guorui Huazi Power Equipment Co., Ltd	Date of Manufacture	2023-04
Receiving Number of Sample (s)	1 set	Receiving Date of Sample (s)	2023-05-25
Test Requirements Decision Criteria	GB/T 1094.1-2013/IEC 60076-1:2011 Power transformers-Part 1: General GB/T 1094.2-2013/IEC 60076-2:2011 Power transformers-Part 2: Temperature rise for liquid-immersed transformers GB/T 1094.3-2017/IEC 60076-3:2013 Power transformers-Part 3: Insulation levels, dielectric tests and external clearances in air GB/T 1094.10-2022/IEC 60076-10:2016+A1:2020 Power transformers-Part 10: Determination of sound levels GB/T 6451-2015 Specification and technical requirements for oil-immersed power transformers GB 20052-2020 Minimum allowable values of energy efficiency and the energy efficiency grades for power transformers Power of attorney requirements		
Test Items	Routine test, type test, special test (Detailed test items are reported at test items and summary of results)		
Description and Condition of Sample (s)	The sample is sent by the customer, the appearance is perfect, and it is suitable for testing.		
Test Date	2023-05-26 ~ 2023-06-01	Test location	No. 400 Guangqiong Road, Jiaxing City
Test Conclusion	The entrusted sample have been tested according to GB/T 1094.1-2013/IEC 60076-1:2011, GB/T 1094.2-2013/IEC 60076-2:2011, GB/T 1094.3-2017/IEC 60076-3:2013, GB/T 1094.10-2022/IEC 60076-10:2016+A1:2020, GB/T 6451-2015, GB 20052-2020 and power of attorney requirements, the loss parameters of the tested samples meet the energy efficiency grade I for power transformers. The inspection results of the inspected items all meet the requirements of the standard (Decision Criteria).  Date of Approval: 2023-06-05		
Note	/		

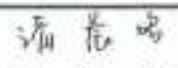
Approved by:


 Shen Hai Tao

Verified by:


 Chen Haijie

Complied by:


 Zhu Chouming

TEST REPORT**NATIONAL CENTER OF QUALITY INSPECTION
FOR ELECTRICAL SAFETY (ZHEJIANG)****1, Sample parameters**

Rate power:	20000kVA
Rate voltage:	35kV/10.5kV
Rate current:	329.9A/1099.7A
Rate frequency:	50Hz
Phase number:	3
Tapping range:	(35±3×2.5%) kV /10.5kV
Connection symbol:	YNd11
Type of cooling:	ONAN
Insulation level:	h.v. line terminal and neutral terminal LI /AC 200/85 kV
	l.v. line terminal LI /AC 75/35 kV

2, Test requirements

GB/T 1094.1-2013/IEC 60076-1:2011

Power transformers-Part 1: General

GB/T 1094.2-2013/IEC 60076-2:2011

Power transformers-Part 2: Temperature rise for liquid-immersed transformers

GB/T 1094.3-2017/IEC 60076-3:2013

Power transformers-Part 3: Insulation levels, dielectric tests and external clearances in air

GB/T 1094.10-2022/IEC 60076-10:2016+A1:2020

Power transformers-Part 10: Determination of sound levels

GB/T 6451-2015

Specification and technical requirements for oil-immersed power transformers

GB 20052-2020

Minimum allowable values of energy efficiency and the energy efficiency grades for power transformers

Power of attorney requirements

3, The sample specification

The power transformer is for outdoor use.



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CNAS L1020



实验室名称: 苏州电器科学研究院股份有限公司
国家电器产品质量检验检测中心

Lab Name: Suzhou Electrical Apparatus Science Research Institute Co., Ltd.
China National Center for Quality Inspection and Test of Electrical
Apparatus Products

No 25M1167-S

型式试验报告 Type Test Report

委托单位: 国瑞华自电力设备有限公司
Client: Guorui Huazi Power Equipment Co., Ltd

产品名称: 电力变压器
Name of Product: Power transformer

产品型号: S20-M-2000/10-NX2
Product Type:

检验类别: 型式试验
Test Category: Type test

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Suzhou Electrical Apparatus Science Research Institute Co., Ltd.

Test Report

№: 25M1167-S

Total 50 Page 01

Client	Guorui Huazi Power Equipment Co., Ltd	Test category	Type test
Manufacturer	Guorui Huazi Power Equipment Co., Ltd	Date of sample receiving	Jul. 26, 2025
Name of sample	Power transformer	Type of sample	S20-M-2000/10-NX2
Address of manufacturer	Outward Industrial Zone, Liushi Town, Yueqing City, Wenzhou City, Zhejiang Province	Original number or date of production	202507026
Date of test	From Aug. 01, 2025 to Aug. 05, 2025	Number of sample	1 set
Test items	Routine test Type test (including calculation of the winding hot-spot temperature-rise) Determination of water content in insulating liquid Determination of flash point (closed-cup) in insulating liquid Measurement of dissolved gasses in dielectric liquid Pressure deflection test Power evaluation on transformer Measurement of zero-sequence impedances on three-phase transformers Measurement of the harmonics of the no-load current Cracking test of tank Short-circuit withstand 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—2022 GB/T 6451—2023 GB/T 7595—2017 GB 20052—2024 JB/T 10088—2016 IEC 60076-1:2011 IEC 60076-2:2011 IEC 60076-3:2013+AMD 1:2018 IEC 60076-5:2006 IEC 60076-10:2016 Commission requirements
Test conclusion	<p>The test results of routine test, type test (including calculation of the winding hot-spot temperature-rise), determination of water content in insulating liquid, determination of flash point (closed-cup) in insulating liquid, measurement of dissolved gasses in dielectric liquid, pressure deflection test, power evaluation on transformer, measurement of zero-sequence impedances on three-phase transformers, measurement of the harmonics of the no-load current, cracking test of tank and short-circuit withstand test of the power transformer (type: S20-M-2000/10-NX2) are in accordance with test standards and commission requirements. The sample has passed the above tests.</p> <p>Measured parameters of no-load and load losses of the sample meet requirements of energy efficiency grade 2 of GB20052—2024.</p> <p>Signing and issuing date: 2025.08.27</p> <p>Note: the conclusion is valid only for the inspected and tested sample.</p>		
Remarks	/		

Compiled by:

SAI

Proofread by:

SAI

Checked by:

WJ

Approved by:

李明智

Test Report	Suzhou Electrical Apparatus Science Research Institute Co., Ltd.	№: 25M1167-S Total 50 Page 02								
<p>1. Sample parameters</p> <p>Rated power: 2000kVA</p> <p>Rated voltage: 10/0.4kV</p> <p>Rated current: 115.5/2886.8A</p> <p>Rated frequency: 50Hz</p> <p>Number of phases: 3</p> <p>Tapping ranges: $\pm 2 \times 2.5\%$</p> <p>Connection symbol: Dyn11</p> <p>Cooling method: ONAN</p> <p>Thermal class of insulation: A</p> <table border="0"> <tr> <td>Insulation level:</td> <td>HV</td> <td>$U_m/LI/LIC/AC$</td> <td>12/75/85/35kV</td> </tr> <tr> <td></td> <td>LV</td> <td>U_m/AC</td> <td>$\leq 1.1/5kV$</td> </tr> </table> <p>2. Test standards</p> <p>GB/T 1094.1—2013 <i>Power transformers—Part 1: General</i></p> <p>GB/T 1094.2—2013 <i>Power transformers—Part 2: Temperature rise for liquid-immersed transformers</i></p> <p>GB/T 1094.3—2017 <i>Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air</i></p> <p>GB/T 1094.5—2008 <i>Power transformers—Part 5: Ability to withstand short circuit</i></p> <p>GB/T 1094.10—2022 <i>Power transformers—Part 10: Determination of sound levels</i></p> <p>GB/T 6451—2023 <i>Technical parameters and requirements for oil-immersed power transformers</i></p> <p>GB/T 7595—2017 <i>Quality of transformer oils in service</i></p> <p>GB 20052—2024 <i>Minimum allowable values of energy efficiency and the energy efficiency grades for power transformers</i></p> <p>JB/T 10088—2016 <i>Sound level for 6kV–1000kV power transformers</i></p> <p>IEC 60076-1:2011 <i>Power transformers—Part 1: General</i></p> <p>IEC 60076-2:2011 <i>Power transformers—Part 2: Temperature rise for liquid-immersed transformers</i></p> <p>IEC 60076-3:2013+AMD1:2018 <i>Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air</i></p> <p>IEC 60076-5:2006 <i>Power transformers—Part 5: Ability to withstand short circuit</i></p> <p>IEC 60076-10:2016 <i>Power transformers—Part 10: Determination of sound levels</i></p> <p>Commission requirements</p> <p>3. Sample description</p> <p>The power transformer is for outdoor use and the structure of coil is non-circular concentric type. External photos of the sample have been attached.</p>			Insulation level:	HV	$U_m/LI/LIC/AC$	12/75/85/35kV		LV	U_m/AC	$\leq 1.1/5kV$
Insulation level:	HV	$U_m/LI/LIC/AC$	12/75/85/35kV							
	LV	U_m/AC	$\leq 1.1/5kV$							

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检 验 报 告

TEST REPORT

Apparatus Distribution power transformer

Model No. S-2000/35

Manufacturer Guorui Huazi Power Equipment Co., Ltd



国家高低压电器质量监督检验中心

National High-low Voltage Electrical Apparatus Quality Supervision And Inspection Center

National High-low Voltage Electrical Apparatus Quality Supervision And Inspection Center	<h1>Inspection Report</h1>	Commission No.: WG18364
Inspection conclusion		
<p>Sample no. & name: S-2000/35 power transformer</p> <p>Truster: Guorui Huazi Power Equipment Co., Ltd.</p> <p>Truster Address: No. 398, Chezhan Road, Yueqing, Zhejiang, China</p> <p>Manufacturer: Guorui Huazi Power Equipment Co., Ltd.</p> <p>Manufacturer Address: No. 398, Chezhan Road, Yueqing, Zhejiang, China</p> <p>Manufacturing No.: LB.2018.5.2</p> <p>Manufacturing Date: May 2018</p> <p>Received Date: 7th June 2018</p> <p>Inspection Date: 7th June 2018~ 11th June 2018</p> <p>Inspection Item:</p> <ul style="list-style-type: none"> Insulation Measurement Ratio-Voltage measurement and connection symbol verification(Routine test) Winding resistance(Routine test) Applied withstand voltage(Routine test) Induced over voltage withstand test(Routine test) No load current and no load loss measurement(Routine test) Short circuit resistance and load loss(Routine test) Temperature rise test(Type test) Lighting impulse(Type test) Noise level(Special test) 		
<p>Inspection standard:</p> <p>GB1094.1-1996 《电力变压器 第1部分 总则》/ IEC 60076-2008</p> <p>GB1094.2-1996 《电力变压器 第2部分:温升》</p> <p>GB1094.3-2003 《电力变压器 第3部分:绝缘水平,绝缘试验和外绝缘空气间隙》</p> <p>GB1094.10-2003 《电力变压器 第10部分 声级测定》</p> <p>GB/T6451-2008 《油浸式电力变压器技术参数和要求》</p> <p>Inspection conclusion:</p> <p>All project compliance the inspection standard requirement, the performance of the sample is qualified</p>		
<p>编制: 林 杰</p> <p>日期: 6.20</p>	<p>审核: 胡 强</p> <p>日期: 6.20</p>	<p>批准: 李 平</p> <p>日期: 6.20</p>

National High-Low Voltage Electrical Apparatus Quality Supervision And Inspection Center		Inspection Report	Commission No.: WG18364
Overview			
<p>Sample no. & name: S-2000/35 power transformer</p> <p>Manufacturer: Guorui Huazi Power Equipment Co., Ltd.</p> <p>Manufacturer address: No. 398, Chezhan Road, Yueqing, Zhejiang, China</p> <p>Manufacturing No.: LB.2018.5.2</p>			
Sample Parameter	Rated voltage: kV	35/0.4	
	Rated capacity: kVA	2000	
	Rated frequency: Hz	50	
	Rated current: A	32.99/2886.8	
	Connection group	Dyn11	
	Cooling method	ONAN	
	Winding's three-phase maximum unbalance rate	≤ 2%	
	No load current: %	≤ 0.8 ^{+10%}	
	No load loss: kW	≤ 1.99 ^{+15%}	
	Short circuit impedance voltage(75 degree celsius): %	6.5 ^{+10%}	
	Load loss(75 degree celsius): kW	≤ 19.7 ^{+15%}	
	Total loss(75 degree celsius): kW	≤ 21.69 ^{+10%}	
	Insulation oil breakdown voltage: kV	≥ 35	
	Winding temperature rise limit: K	≤ 65	
	Lighting impulse withstand voltage: kV	75	
	Sound power level : dB	≤ 65dB	
Note	/		
委托方代表: 李梁			
试验日期: 起 2018.6.7 止 2018.6.11			

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TEST REPORT

Name of the sample: high / low voltage preinstalled substation

Model: YBW-3150/15

Entrustment unit: BEIAN ELECTRIC CO., LTD

Type of test: type test



National High-voltage Electrical Apparatus Quality Supervision and Inspection Center
Gansu Electric Apparatus Research Institute

Report number: XG22011241

National High and Low Voltage Electrical Apparatus Quality Supervision and Inspection Center		Inspection Report	Principal ID: WG22011129
Catalog			
S/N	Catalog		Page number
1	Catalog		1
2	Test conclusion		2
3	Main components of trial products		3
4	Sample photo		4
5	Insulation test		5、6、7
6	Verification of creepage distance		8
7	Temperature rise test		9-12
8	Short circuit withstand current and peak withstand current test of main circuit		16
9	Short circuit withstand current and peak withstand current test of grounding circuit		17
10	Continuity test of grounding circuit		17
11	Functional test		18、19
12	Protection level verification		20、21
13	Test of casing tolerance mechanical stress test		22
14	Verifying sound level test		23
15	Test schematic diagram		15
16	Test oscillograph		13、14、24~27
17	Test instrument and equipment list		28、29
	The following blank		
Remarks:	The above inspection items were completed at No. 6-6 Chang Kai Road, Qinzhou District, Tianshui, Gansu province.		

Report number: XG22011241

National High and Low Voltage Electrical Apparatus Quality Supervision and Inspection Center	Inspection Report	Principal ID: WG22011092
Inspection Report		
<p>Sample type, name: YBW-3150/15 high voltage / low voltage pre installed substation</p> <p>Entrustment unit: BEIAN ELECTRIC CO., LTD</p> <p>Address of entrustment: No.268, Wei 16 Road, Yueqing Economic Development Zone</p> <p>Manufacturing unit: BEIAN ELECTRIC CO., LTD</p> <p>Address of manufacturing unit: No.268, Wei 16 Road, Yueqing Economic Development Zone</p> <p>Sample number: 202201101</p> <p>Date of departure: January 2022</p> <p>Date of sample reception: January 31, 2022</p> <p>Test date: 2022.2.4 - 2022.2.24</p> <p>Inspection project:</p> <p>Insulation test [power frequency voltage: high pressure chamber phase, relative 60 kV/lmin, fracture 68 kV/lmin; low voltage main circuit 2500V/lmin; lightning impulse voltage of high pressure chamber: verification of climbing distance between interphase, relative 125kV, fracture 135kV]</p> <p>Temperature rise test [I21.2A/4546.8A (high voltage circuit / low voltage circuit)]</p> <p>Short-time tolerance current and peak tolerance current test of main circuit [30kA (value), 63 kA (peak), 1s] short-time tolerance current and peak tolerance current test [20kA (valid value), 2S; 50 kA (peak), 0.3s]</p> <p>Grounding circuit continuity test [$< 100m\Omega$]</p> <p>Functional test</p> <p>Protection level verification [shell: IP33D]</p> <p>Verification of enclosure resistance to mechanical stress test, verification of sound level test [$< 65dB$]</p> <p>Inspection basis:</p> <p>GB/T1 7467-2010 / IEC 62271-202 "high voltage / low voltage pre installed substation"</p> <p>Test conclusion:</p> <p>The inspection results of the inspection items conform to the standards and the technical documents, and the corresponding properties of the test products are Qualified.</p>		
prepared by: Wang Xiawa	Check: Wang Yan	Validation: Liu Yan Approval: Li Fan
signature: Wang Xiawa	signature: Wang Yan	signature: Liu Yan signature: Li Fan
Date: 2022.3.7	Date: 2022.3.7	Date: 2022.3.7 Date: 2022.3.7



Main components of trial products	
1. Transformer	
Model specification:	S-3150/15
Date of production:	December 2021
Factory number:	211203262
Manufacturing unit:	GUORUI HUAZI POWER EQUIPMENT CO., LTD
2. The fan	
Model specification:	200FZY2-D
Date of production:	December 2021
Factory number:	/
Manufacturing unit:	Zhejiang Olli Electric Co., Ltd.
3. High voltage switchgear	
Model specification:	HXGND-12/630-20, HXGND-12/125-31.5
Date of production:	November 2021
Factory number:	21110201、21110202
Manufacturing unit:	BEIAN ELECTRIC CO., LTD
4. Lightning arrester	
Model specification:	YH5WS-17/45
Date of production:	November 2021
Factory number:	211181026、211181027、211181028
Manufacturing unit:	Zhejiang Hengda science and Technology Electric Co., Ltd.
5. High voltage fuse	
Model specification:	XRNTD-12/125-31.5
Date of production:	October 2021
Factory number:	2021107152、2021107153、2021107154
Manufacturing unit:	Zhejiang Jilin Electric Co., Ltd.
6. Low voltage switchgear	
Model specification:	GGD
Date of production:	December 2021
Factory number:	21121031
Manufacturing unit:	BEIAN ELECTRIC CO., LTD
7. Low voltage compensation cabinet	
Model specification:	GGJ
Date of production:	December 2021
Factory number:	21121045
Manufacturing unit:	BEIAN ELECTRIC CO., LTD
8. Enclosure	Self-control



Type Test Report

Product Name: Compact Substaion




Model Number: YBW-1250/33

Client: Beian Electric Co., Ltd

Testing Institution: Hunan Electric Research
Institute Testing Group Co., Ltd.



Type test report

Sample name: Compact substation Model number: YBW-1250/33 Quantity: 1 Sample condition: good Sample source: enterprise sample delivery Sample production serial number: 202309051 Sample receipt date: September 05, 2023 Completion date: September 14, 2023	Client: Beian Electric Co., Ltd. Address: No. 268 Wei 16th Road, Development Zone, Yueqing City, Zhejiang Province, China Manufacturer: Beian Electric Co., Ltd. Manufacturer's address: No. 268 Wei 16th Road, Development Zone, Yueqing City, Zhejiang Province, China	
Test basis standard: GB/T17467-2020 High voltage/ low voltage prefabricated substation IEC 62271-202:2014, High-voltage switchgear and Controlgear- Part 202: High voltage / low voltage prefabricated substation, MOD GB/T1094.3-2017 (IEC 60076-3: 2013, MOD) Power transformers - Part 3: Insulation levels, dielectric tests and external clearances in air GB/T 6451-2015 Specification and technical requirements for oil-immersed power transformers GB/T2423.1-2008 Environmental testing for electric and electronic products—part 2: Test methods —Tests A: Cold IEC 60068-2-1:2007, Environmental testing—part 2-1: Tests—Test A: Cold, IDT GB/T2423.2-2008 Environmental testing for electric and electronic products—part 2: Test methods —Tests B: Dry heat IEC 60068-2-2:2007, Environmental testing—part 2-2: Tests—Test B: Dry heat, IDT		
Test conclusion: Qualified		
Description of product models and relevant information covered by this application unit: YBW-1250/33 Se=1250kVA Ue=33kV/0.4kV f=50Hz IP54 High-voltage connecting line: $I_k/I_p = 25\text{kA}/63\text{kA}$ 4s ground circuit: $I_{ke}/I_{pe} = 25\text{kA}/63\text{kA}$ 2s		
Principal inspector: Li Jianhong, signature:  Date: September 14, 2023	Hunan Electric Research Institute Testing Group Co., Ltd. September 14, 2023	
Review: Xu Yan, signature:  Date: September 14, 2023		
Issued by: Li Bin, Signature:  Date: September 14, 2023		
Remarks		

Sample description and description

1. Description of product composition and structural features (structural description):

Including the main structure composition, operation mode, installation mode and wiring mode of the product:

Main structural components: power transformer, high voltage and low voltage switchgear and control equipment, high voltage and low voltage internal connection, auxiliary equipment and loop, shell, etc.

Operation mode: manual or electric operation in the housing.

Installation method: outdoor type, fixed and vertical installation on the ground.

Wiring mode: lower incoming line and lower outgoing line; the incoming line unit is firmly connected with each outlet unit.

Also includes the following contents:

1) Product model and name: YBW-1250/33 Compact substation

2) Provide drawings and numbers

Electrical schematic diagram: /

general assembly drawing: /

3) Main structural data:

Structural features: (at least include the description of high voltage chamber, transformer chamber, low voltage chamber)

3.1 Meet the requirements of GB/T17467-2020 standard for outdoor use. The models used in this report meet the requirements of JB/T8754-2018 Model Preparation Method of High-voltage Switchgear and Control Equipment, with the list of sample components and sample photos.

3.2 Structural features: the test product has three independent rooms: high voltage room, transformer room and low voltage room. All transformer and distribution equipment are installed in the same shell. Each room is connected by cable and rectangular copper bus, and each room is equipped with operation and maintenance channels for easy operation and maintenance.

3.3 SF6 high-voltage metal closed ring switchgear XGN-33 was selected for the high-voltage part of the test. The transformer part uses S-1250/33 oil-immersed power transformer; In the low-voltage part, NA1-2000X 2000A universal circuit breaker is used as the low-voltage main circuit breaker, and NM1-6330s /3300 630A is used as the branch circuit breaker. The low-voltage switchgear is composed of the measuring and operating system.

Power transformer (components list): see Table 1 high and low voltage switch appliances and components (components list): see Table 2 and Table 3

Bus and insulated wire (model specification, material name and grade, manufacturer): see Table 4

Insulation support parts, bus splint, bus frame and related connections (material name and grade number, manufacturer): see Table 5

Shell (material name and brand number, manufacturer): see Table 6

Overall dimensions (height, width and depth) (mm): 2550×5800×2250 (mm×mm×mm)

Protective grounding measures: use 10×80mm at the bottom of the substation enclosure²The copper row is made for the total grounding connection system, the station system and door are with this The ground system makes reliable connection to ensure continuity of ground.

Corrosion prevention and condensation: The shell adopts composite shell, and the internal high and low voltage switchgear adopts electrostatic spraying with epoxy powder; and heaters are installed in high voltage room and cable room to prevent condensation.

Type of high voltage cable: ☒ insulated ☐ non-insulated (exposed conductor)

Whether the outer surface of the high voltage cable is grounded: ☒ grounding ☐ is not grounded

Type of low-voltage cable: ☐ insulated ☒ non-insulated (exposed conductor)

Whether the outer surface of the low voltage cable is grounded: ☐ grounding ☒ is not grounded



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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

No 23M1770-S

检验 (试验) 报告 Test Report

委托单位: GUORUI HUAZI POWER EQUIPMENT CO., LTD.
Client:

产品名称: Power transformer
Name of Product:

产品型号: S-315/15
Product Type:

检验类别: Commission/Monitoring test
Test Category:

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Test Report

№: 23M1770-S

Total 41 Page 01

Client	GUORUI HUAZI POWER EQUIPMENT CO., LTD.	Test category	Commission/Monitoring test
Manufacturer	GUORUI HUAZI POWER EQUIPMENT CO., LTD.	Date of sample receiving	Nov. 05, 2023 (Short-circuit withstand test)
Name of sample	Power transformer	Type of sample	S-315/15
Address of manufacturer	398 Station Road, Yueqing City, Zhejiang	Original number or date of production	PS230712E03-0005
Date of test	From Nov. 03, 2023 to Nov. 11, 2023	Number of sample	1 set
Test items	Routine test Type test Pressure deflection test Measurement of zero-sequence impedances on three-phase transformers Measurement of the harmonics of the no-load current Short-circuit withstand test	Test standards	GB 1094.1—2013 GB 1094.2—2013 GB 1094.3—2003 GB 1094.5—2008 GB/T 1094.10—2003 IEC 60076-1:2011 IEC 60076-2:2011 IEC 60076-3:2013 IEC 60076-5:2006 IEC 60076-10:2016 Commission requirements
Test conclusion	<p>The test results of routine test, type test, pressure deflection test, measurement of zero-sequence impedances on three-phase transformers, measurement of the harmonics of the no-load current and short-circuit withstand test of power transformer (type: S-315/15) are in accordance with test standards and commission requirements. The sample has passed the above tests.</p> <p>Signing and issuing date: 2023-12-05</p> <p>Period of validity: 5 years</p> <p>Note: the conclusion is valid only for the inspected and tested sample.</p>		
Remarks	Except short-circuit withstand test, other tests were monitored in GUORUI HUAZI POWER EQUIPMENT CO., LTD.		

Compiled by:  Proofread by:  Checked by:  Approved by: 

Test Report	China National Center for Quality Supervision and Test of Electrical Apparatus Products			№: 23M1770-S Total 41 Page 02
1. Sample parameters				
Rated power: 315kVA				
Rated voltage: 15/0.4kV				
Rated current: 12.1/454.7A				
Rated frequency: 50Hz				
Number of phases: 3				
Tapping ranges: /				
Connection symbol: Dyn5				
Cooling method: ONAN				
Class of insulation and heat-resistant: /				
Insulation level: h.v. Line terminal LI/AC 125kV/50kV				
l.v. Line terminal AC 5kV				
2. Test standards				
GB 1094.1—2013 <i>Power transformers—Part 1: General</i>				
GB 1094.2—2013 <i>Power transformers—Part 2: Temperature-rise for liquid-immersed transformers</i>				
GB 1094.3—2003 <i>Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air</i>				
GB 1094.5—2008 <i>Power transformers—Part 5: Ability to withstand short circuit</i>				
GB/T 1094.10—2003 <i>Power transformers—Part 10: Determination of sound levels</i>				
IEC 60076-1:2011 <i>Power transformers—Part 1: General</i>				
IEC 60076-2:2011 <i>Power transformers—Part 2: Temperature rise for liquid-immersed transformers</i>				
IEC 60076-3:2013 <i>Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air</i>				
IEC 60076-5:2006 <i>Power transformers—Part 5: Ability to withstand short circuit</i>				
IEC 60076-10:2016 <i>Power transformers—Part 10: Determination of sound levels</i>				
Commission requirements				
3. Sample description				
The power transformer is for outdoor use, and the structure of the coil is non-rotundate concentric type coil. The value of no-load and load parameters are provided by client. External photos of the sample have been attached.				



2014002878Z



(2014)国认监试字: 0471号



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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

No 23M1773-S

检验 (试验) 报告 Test Report

委托单位: GUORUI HUAZI POWER EQUIPMENT CO., LTD.
Client:

产品名称: Power transformer
Name of Product:

产品型号: S-400/15
Product Type:

检验类别: Commission/Monitoring test
Test Category:

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Test Report

№: 23M1773-S

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Client	GUORUI HUAZI POWER EQUIPMENT CO., LTD.	Test category	Commission/Monitoring test
Manufacturer	GUORUI HUAZI POWER EQUIPMENT CO., LTD.	Date of sample receiving	Nov. 05, 2023 (Short-circuit withstand test)
Name of sample	Power transformer	Type of sample	S-400/15
Address of manufacturer	398 Station Road, Yueqing City, Zhejiang	Original number or date of production	PS230712D02-0003
Date of test	From Nov. 03, 2023 to Nov. 11, 2023	Number of sample	1 set
Test items	Routine test Type test Pressure deflection test Measurement of zero-sequence impedances on three-phase transformers Measurement of the harmonics of the no-load current Short-circuit withstand test	Test standards	GB 1094.1—2013 GB 1094.2—2013 GB 1094.3—2003 GB 1094.5—2008 GB/T 1094.10—2003 IEC 60076-1:2011 IEC 60076-2:2011 IEC 60076-3:2013 IEC 60076-5:2006 IEC 60076-10:2016 Commission requirements
Test conclusion	<p>The test results of routine test, type test, pressure deflection test, measurement of zero-sequence impedances on three-phase transformers, measurement of the harmonics of the no-load current and short-circuit withstand test of power transformer (type: S-400/15) are in accordance with test standards and commission requirements. The sample has passed the above tests.</p> <p>Signing and issuing date: 2023-12-05</p> <p>Period of validity: 5 years</p> <p>Note: the conclusion is valid only for the inspected and tested sample.</p>		
Remarks	Except short-circuit withstand test, other tests were monitored in GUORUI HUAZI POWER EQUIPMENT CO., LTD.		

Compiled by:  Proofread by:  Checked by:  Approved by: 

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1. Sample parameters		
Rated power: 400kVA		
Rated voltage: 15/0.4kV		
Rated current: 15.4/577.3A		
Rated frequency: 50Hz		
Number of phases: 3		
Tapping ranges: /		
Connection symbol: Dyn5		
Cooling method: ONAN		
Class of insulation and heat-resistant: /		
Insulation level: h.v.	Line terminal	LI/AC 125kV/50kV
	l.v.	Line terminal AC 5kV
2. Test standards		
GB 1094.1—2013 Power transformers—Part 1: General		
GB 1094.2—2013 Power transformers—Part 2: Temperature-rise for liquid-immersed transformers		
GB 1094.3—2003 Power transformers—Part 3: Insulation levels, dielectric tests and external clearances in air		
GB 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		
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 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 non-rotundate concentric type coil. The value of no-load and load parameters are provided by client. External photos of the sample have been attached.		