

R series

High temperature electronic creep fatigue testing machine

Product model:RPL Series

01 Overview

RPL series of high temperature electronic creep fatigue testing machine has powerful functions, in addition to the basic creep, relaxation and endurance testing functions, it can also perform tension and compression zero crossing, low cycle fatigue tests, and creep fatigue tests.

02 Standards and methods

Provide a complete set of creep fatigue test solutions according to the different characteristics of materials or products.

Fully meet the GB, ISO, ASTM, EN, JIS and other standards

High-Temperature Creep and Stress-Rupture Testing Machines

Test Methods for Uniaxial Tensile Creep of Metallic Materials

Standard Test Methods for Conducting Creep, Creep-Rupture, and Stress-Rupture Tests of Metallic Materials

Test Methods for Tensile Stress Relaxation of Metallic Materials

Standard Test Methods for Stress Relaxation of Materials and Structural Parts

Test Methods for High Temperature Tensile Creep of Metals

Test Methods for High Temperature Tensile of Metals

Standard Test Methods for Creep-Fatigue Testing

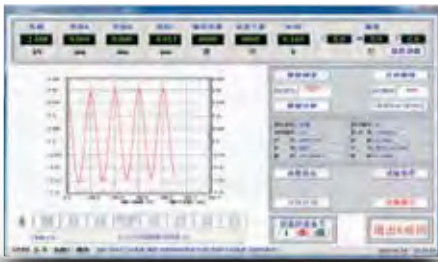


03 Advantages and characteristics

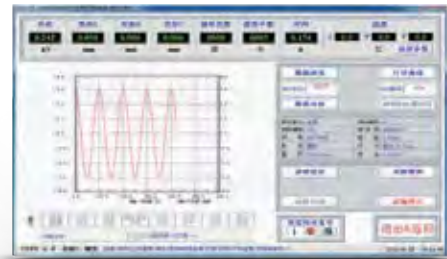
The dynamic test process is pull pull or pull press type, which can cross zero without gap.

Two sets of static and dynamic test systems can be configured (including pull rods, clamp fixtures, extensometers, high temperature furnaces) according to the user needs. It can be completed separately and controlled automatically by the controller.

Tensile endurance test, creep test, relaxation test, low cycle fatigue test and creep fatigue test under normal high temperature environment, as well as tension and compression low cycle fatigue test and creep fatigue test



Real-time test curve of cosine deformation



Real-time test curve of cosine force

04 RPL series high temperature electronic creep fatigue testing machine technical parameter table

Model	RPL10	RPL30	RPL50	RPL 100
Max test force	10kN	30kN	50kN	100kN
Accuracy level	0.5			
Host coaxiality	≤8%			
Measurement range	1%-100%FS			
Dynamic frequency	0.01-0.5Hz			
Dynamic waveform	Triangle wave、Trapezoid wave、Cosine wave			
Deformation resolution	0.001mm			
Deformation error	±0.002mm			
Pull rod speed	0.01-100mm/min			
Pull rod max stroke	≥180			
Power	Host220V, ≤400W; Atmospheric furnace380V, ≤4kW		Host220V, ≤1kW; Atmospheric furnace380V, ≤4kW	

Typical

Application introduction



Multi-head electronic relaxation creep testing machine

Product model: ZRDL-D Series

Main uses

The multi-head electronic creep endurance testing machine is mainly used for the compression creep and relaxation tests of non-metallic materials at a certain temperature.

Advantages and Characteristics

Three independent loading systems can be used for different tests at the same time.

With the corresponding accessories and software, creep test, relaxation test, low cycle fatigue test and creep fatigue test can be carried out.

Continuous working time: more than 500 hours.



Biaxial tensile creep testing machine

Product model: ZRDL-T Series

Main uses

It is mainly used to test the persistent creep test of glued materials under the condition of simultaneous force in the horizontal and vertical directions.



Bending creep testing machine

Product model: ZRDL-W Series

Main uses

It is mainly used for bending creep test of FRP and related materials under temperature environment. According to GB / T1456 Test Methods for Bending Performance of Sandwich Structure, the bending stiffness and shear stiffness of FRP can be calculated by three-point bending test of extended beam.



Compression creep testing machine

Product model: ZRDL-Y Series

Main uses

It is used for compression creep test of materials in high temperature environment.

Test Methods for Compression Creep of Rigid Foam



Small punch testing machine

Product model: ZRDL-CK Series

Main uses

It is used to test the creep properties of micro sheet specimens at high temperature. It is a new method to obtain the creep properties of in-service components.



Rubber creep testing machine

Product model: ZRDL-Y Series

Main uses

It is mainly used for tensile compression creep rupture test of rubber materials at high and low temperature. It meets the standard of GB / T1685 Determination of Compression Stress Relaxation of Vulcanized Rubber or Thermoplastic Rubber at Room Temperature and High Temperature.



Corrosion testing machine

Product model: ZRDL-GF Series

Seawater corrosion creep endurance testing machine

High temperature corrosion testing machine

High temperature salt spray corrosion testing machine

C-ring stress corrosion testing machine

R series creep durability test system

It can be used for all kinds of high temperature creep test from 30KN to 600kN

01 Overview



R series CREEP DURABILITY TEST SYSTEM is mainly used for tensile, compression, durability, creep and relaxation tests of metal and nonmetal materials, as well as low cycle fatigue, creep fatigue and stress corrosion tests. It includes electronic high temperature creep rupture testing machine, mechanical high temperature creep rupture testing machine, creep fatigue testing machine, slow tensile stress corrosion testing machine, etc.

02 Standards and methods

According to the different characteristics of materials or products, we provide a complete set of solutions for stress rupture and creep tests.

Fully meet the GB, ISO, ASTM, EN, JIS and other standards

JJG276-2009 High-Temperature Creep and Stress-Rupture Testing Machines

GB / T2039-2012 Metallic materials - Uniaxial creep testing method in tension

ASTM E139-11 Standard Test methods for Conducting Creep, Creep-Rupture and Stress-Rupture Tests of Metallic Materials

GB / T10120-2013 Metallic materials - Tensile stress relaxation - Method of test

ASTM E328-2013 Standard Test Methods for Stress Relaxation for Materials and Structures

HB5151-1996 Test Method for High temperature tensile creep of metals

HB5150-1996 Test Method for High temperature tensile rupture of metals

ASTM E2714-2013 Standard Test Method for Creep-Fatigue Testing

GB / T15248-2008 The test method for axial loading constant-amplitude low-cycle fatigue of metallic materials

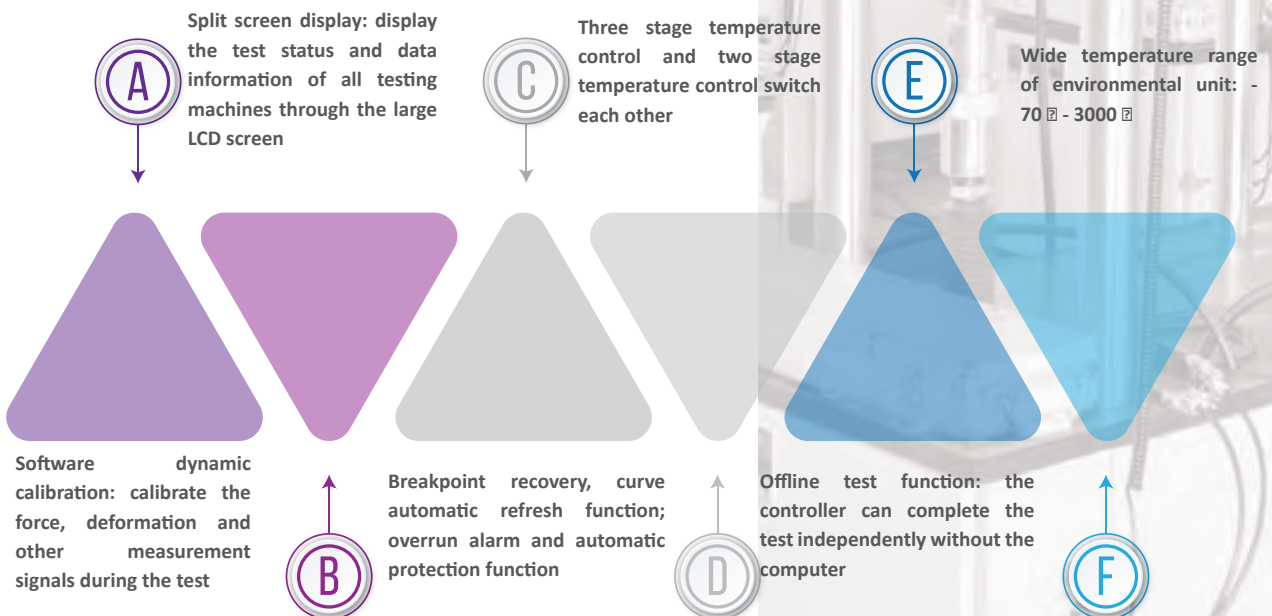


Large Screen Data Monitoring System



LCD Large Screen Data Display

03 Advantages and characteristics



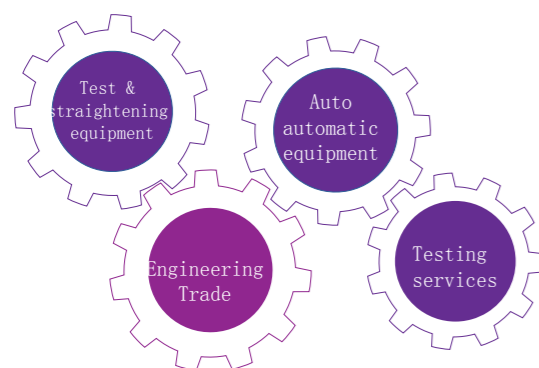
COMPANY PROFILE

Sinotest Equipment Co., Ltd. (short name: SINOTEST) was founded in 1959 (original name: Changchun Research Institute for Testing Machines of the Ministry of Machine Building Industry; former name: Changchun Research Institute for Mechanical Science Co., Ltd.). SINOTEST is a subsidiary of SINOMACH GROUP, one of the world's top 500 large state-owned enterprises. It is the support unit of the national testing machine quality supervision & inspection center and the national testing machine standardization committee. The national testing machine industry association and the association Secretariat are all located in SINOTEST. SINOTEST is known as the "cradle of China's testing machine technology". It is a high-tech enterprise with perfect innovation ability in China's test equipment industry.

SINOTEST is a state-level scientific and technological innovation enterprise mainly engaged in R & D and manufacturing of "test equipment". At present, the company has 120 patents, including 61 invention patents, 30 software copyrights and 29 utility models. The company presided over the formulation of 30 national standards and 42 industrial standards. SINOTEST has undertaken 4 national major scientific instrument projects. 3 of them have been accepted by the state. Currently, the project of "high temperature and high frequency in situ testing technology and application" is passing the acceptance of scientific research achievements. SINOTEST has kept continuously innovating. It has a number of international cutting-edge core technologies in the test equipment industry, and has solved a number of national "neck sticking" technical problems, including hydrostatic support technology, measurement and sensing technology, etc. A batch of key technology has been in an advanced position in the world.

SINOTEST is a professional engineering test and solution provider in China. It has advanced product innovation ability and special product R & D and manufacturing system in the industry. It is a high-end solution provider in the whole industry chain covering the development of unit components, manufacturing of finalized products, customized special products and overall construction of laboratory.

Now, SINOTEST has formed an industrial layout of one center and two bases, with R & D center located in Beijing and manufacturing bases located in Changchun and Wuxi. SINOTEST focuses on the field of high-end equipment manufacturing, leads the development of China's test equipment technology and industry, and makes unremitting efforts for the rise of national industry!



Core value :

Integrity, innovation, passion, joint efforts and win-win cooperation

With 60 years of material testing experience, SINOTEST provides professional material testing solutions for users with rich technology accumulation and strong innovation ability.



- Enterprise qualification
- High tech Enterprise
- Innovative technology enterprise
- ISO9001 quality management system
- German Rhine certification
- EU CE certification
- Safety production standardization certification
- Intellectual property management system certification
- Industry qualification
- National testing machine quality supervision & Inspection Center
- National Technical Committee of testing machine standardization
- National straightening machine standardization group
- Secretariat of National Testing Machine Industry Association
- Industry journal "Engineering and testing"
- R & D and testing institutions
- Academician workstation, postdoctoral research workstation
- Engineering Research Center of material testing instrument in mechanical industry
- Research Center of straightening equipment in mechanical industry

From standardized test equipment to customized test system and series test solutions, SINOTEST is working hard to meet the special needs of users, to build and establish a domestic first-class and internationally influential high-end brand.

MATERIAL MECHANICS TEST EQUIPMENT

SINOTEST is recognized as the most powerful test equipment technology leading brand in China. With excellent product quality, professional technical support and perfect after-sales service, it aims to provide users with perfect test solutions.

Application area

The technical capability of SINOTEST covers the whole system of material mechanics test, and can provide you with comprehensive test solutions to meet the test requirements of almost all industries, especially in the aspects of micromechanics, large-scale material structure, mechanical property test under high temperature and complex environment in scientific research level, as well as personalized special demand test equipment.

Application fields: metals, plastics, rubber, textiles, biomedical materials, composite materials, electronic industry, parts processing, automobile manufacturing, aerospace, etc.

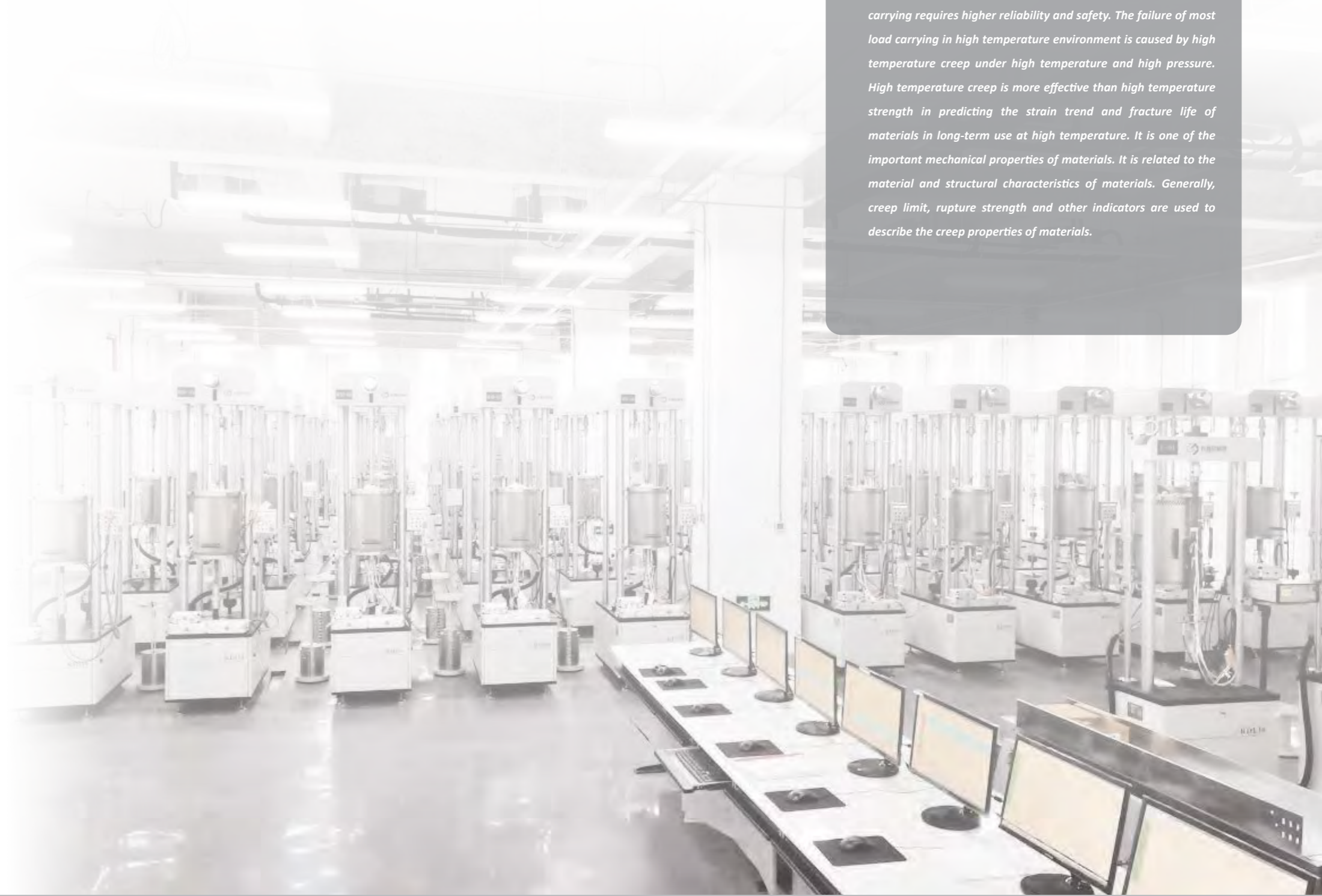
Flexible modular test procedure

Standard modular test accessories

Intelligent automatic test software

Accurate digitized measurement and analysis system

At present, due to high temperature and corrosion in petrochemical, energy, metallurgy and other industries, load carrying requires higher reliability and safety. The failure of most load carrying in high temperature environment is caused by high temperature creep under high temperature and high pressure. High temperature creep is more effective than high temperature strength in predicting the strain trend and fracture life of materials in long-term use at high temperature. It is one of the important mechanical properties of materials. It is related to the material and structural characteristics of materials. Generally, creep limit, rupture strength and other indicators are used to describe the creep properties of materials.



PARTNER

合作伙伴

High temperature creep endurance test equipment is generally composed of several machines to form a system, including host, control system and data processing system, and can also be composed of different types of machines. SINOTEST has always been focusing on the continuous innovation of creep equipment technology. The new generation of creep testing machine is based on the years technology accumulation of creep equipment. Coupled with advanced design concept, we seek breakthroughs in mechanical design, electrical control, software manipulation, ergonomics and other aspects. On the premise of retaining the original stiffness of the equipment, the new generation of creep testing machine improves the structure and operation of the host in order to provide more perfect new experience for customers. We have carried out all-round technical upgrading in the aspects of control mode and cluster control. Over the years, SINOTEST has provided thousands of high temperature creep endurance test equipment for hundreds of customers, serving the key industries and fields of the lifeline of the national economy.

重点战略合作客户

中国特种设备检验研究院	175
宝山钢铁股份有限公司	170
天津重型装备工程研究有限公司	145
中科院沈阳金属所	138
东方电气集团东方汽轮机有限公司	111
北京科技大学(国家长期材料服役中心)	112
合肥通用机械研究院	94
中国钢研科技集团 (钢铁研究总院、钢研纳克检测技术有限公司、 钢研高纳科技股份有限公司)	91
长春中机检测公司	80
哈尔滨汽轮机有限公司	73
中国一重集团公司	55
西安热工研究院有限公司	53
东方电气集团东方锅炉股份有限公司	52
哈尔滨锅炉有限责任公司	47
抚顺特钢	40
上海汽轮机有限公司	39
中国航空标准件有限责任公司	33
中国二重集团	32
湖南航天天麓新材料检测公司	30
哈尔滨东安发动机	30
浙江海岩国检	30
山东电力研究院	30

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