

全国检测基地

广州广电计量检测股份有限公司(总部)

地址：广州市天河区黄埔大道西平云路163号
电话：020-38699960
传真：020-38695185

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传真：0510-68002628

广电计量检测(西安)有限公司

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电话：029-88765096
传真：029-88850619

广电计量检测(武汉)有限公司

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广电计量检测(北京)有限公司

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传真：010-60936200-5559

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电话：021-61806192
地址：021-61806192

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广电计量检测(湖南)有限公司

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传真：0731-82677105

广电计量检测(天津)有限公司

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河南广电计量检测有限公司

地址：郑州市高新区长椿路11号国家大学科技园12栋1层1号
电话：0371-56535888
传真：0371-56535999

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传真：028-86496433

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传真：0532-58820281

广州广电计量检测股份有限公司(杭州)

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传真：0571-56070101

广电计量检测(沈阳)有限公司

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全国服务网络

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Fax: 86-20-38695185

无锡 Wuxi
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Fax: 86-510-68002628

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Fax: 86-10-60936200-5599

长沙 Changsha
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Fax: 86-731-82677105

深圳 Shenzhen
Tel: 86-755-22732318
Fax: 86-755-86242264

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Fax: 86-21-61806192

天津 tianjin
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Fax: 86-22-58226988

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Fax: 86-27-51861617

东莞 Dongguan
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Fax: 86-769-82063020

苏州 Suzhou
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Fax: 86-531-88687791

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Fax: 86-28-86496433

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Fax: 86-760-88862111

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Fax: 86-571-56070101

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Fax: 86-532-58820281

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Fax: 86-23-67769822

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Fax: 86-756-6281823

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Fax: 86-574-87011853

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Fax: 86-24-83899300

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Fax: 86-431-85858612-8004

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Fax: 86-379-63316369

南昌 Nanchang
Tel: 86-791-86317130
Fax: 86-791-86317083

芜湖 Wuhu
Tel: 86-553-5877001
Fax: 86-553-5877001

烟台 Yantai
Tel: 86-535-3039081
Fax: 86-535-3039082

南宁 Nanning
Tel: 86-771-5789787

哈尔滨 haerbin
Tel: 86-451-51056172

GRG TEST 2016.7 版



环境与可靠性检测中心

ENVIRONMENTAL AND RELIABILITY TESTING CENTER (GERTC)

广州广电计量检测股份有限公司

GUANG ZHOU GRG METROLOGY & TEST CO.,LTD.

广电计量微信公众号：广电计量



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关于我们

广州广电计量检测股份有限公司（简称：广电计量）是原国家信息产业部电子602计量站，通过了国家实验室（CNAS）和总装军用实验室认可，获得中国计量认证（CMA）、食品检验认证（CMAF）和GJB9001B质量体系认证，是武器装备承制单位、二级保密资格单位和中国CB实验室，并获得众多国际著名机构和组织的能力认可和授权，检测与认证结果得到国际公认。

广电计量始建于1964年，总部位于广州，在全国建立了广州、深圳、长沙、武汉、无锡、郑州、北京、天津、西安、成都、沈阳、青岛、杭州、上海、合肥等15大检测基地和30多个业务分公司，构筑了一流的计量检测技术公共服务平台及覆盖全国的技术保障体系和服务网络，已成长为计量检测技术服务综合实力最强的全国性专业机构之一。2015年，广电计量在“全国中小企业股份转让系统”（新三板）成功挂牌上市，证券简称：广电计量，证券代码：832462，成为广州市国资系统首家登陆新三板的企业。

About Us

GUANGZHOU GRG METROLOGY&TEST CO.,LTD. (GRG Test) is the original Number 602 metrology station of the Ministry of the Military Electronic Information Industry, approved by CNAS and Military laboratory, get CMA,CMAF and GJB9001B quality system certification. GRGT is the weapons and equipment manufacturing units, the secondary secrecy qualification units and the CB Laboratory of china, which obtain capacity recognition and authorization of many international institutions and organizations, the testing and certification results received international recognition.

GRG Test was established in 1964, its headquarters in Guangzhou, and has established 15test base and more than 30 business branches in Guangzhou ,Shenzhen,Changsha, Wuhan ,Wuxi ,Zhengzhou, Beijing ,Xi'an ,Chengdu ,Shenyang ,Qingdao ,Hangzhou , Shanghai ,Hefei and so on. Building a first-class metrology and testing technology public service platform and covering the country's technical support system and service network, has grown into one of the most powerful national professional institutions in the measurement of technical services. 2015, GRG Test successfully listed in National Equities Exchange and Quotations (new three boards), The securities referred to GRG Test, stock code: 832462, became the first state-owned assets system to landing new three board companies in Guangzhou.



广电计量环境与可靠性检测中心一直致力于环境可靠性研究和测试，在全国建有广州、北京、天津、沈阳、武汉、长沙、无锡、西安、成都九个民用和军用环境可靠性试验室，通过了国家实验室（CNAS）、国防实验室（DILAC）和总装实验室认可，总面积达30000平方米，拥有完善的环境可靠性试验设备和专业的人才队伍。

- 1、拥有先进的环境可靠性试验设备300多台套（其中1～20吨三综合试验箱30台套，1～35吨电磁振动台20多台套，以及全套沙尘试验与淋雨试验设备）；
- 2、满足相关国标和国军标GJB899A、GJB150/GJB150A、GJB367A、GJB548、GJB360等要求；
- 3、可提供可靠性优化设计与分析、可靠性试验与评估、力学环境类试验、气候环境类试验、综合环境试验、整车环境试验、可靠性方案、失效分析、试验大纲的编写、夹具设计、故障分析和整改建议；
- 4、可满足多个设备同时测试，多项目比对；
- 5、可为各兵种装备部门、国防军工企业及科研院所提供军用装备定型、鉴定、摸底试验以及计量校准服务。

GRG Test Environmental and Reliability Testing Center has been dedicated to environmental reliability research and testing since its foundation. and has established nine environmental and reliability collaborating laboratories, serving for both civilian and military products, in Guangzhou, Beijing, Tianjin, Shenyang, Wuhan, Changsha, Wuxi, Xi'an, Chengdu. GRGT has approved by CNAS, DILAC and Military laboratory. With complete environmental reliability test equipments and professional personals. Its total area reaches 30000 square meters.

- 1. It has 300 sets of advanced environmental reliability test equipments (30 sets of three comprehensive test chambers ranging from 1 to 20 ton, 20 sets of vibrators ranging from 1~35 ton and complete sets of sand and dust test and rain test equipments)
- 2. Meeting relative National standard and military standard, such as GJB889A、GJBA150/150A、GJB367A、GJB548、GJB360.
- 3. We can supply Reliability optimization and analysis, reliability test and evaluation, mechanical environment test, climate environment test, environment test for hole vehicle, reliability scheme, failure analysis, editing for test outline, Fixture design, fault analysis and rectification.
- 4. Can meet multiple devices testing at the same time and comparisons of multi projects .
- 5. Can supply services for all branches of the military equipment department, defense industry enterprise and research Institute in equipment designation, identification diagnostic test and measurement calibration.





广电计量一直致力于产品研制和生产阶段环境与可靠性试验的研究及技术服务，从产品技术研发、设计、定型、样品生产到量产质控，提供一站式的环境与可靠性试验解决方案，为客户提高产品的可靠性、稳定性、环境适应性和安全性，缩短产品的研发和生产周期，保驾护航。

行业地位

是政府、军队/国防和民用领域首选的环境与可靠性实验室；

是行业内为数不多同时通过国家实验室认可、国防实验室认可、总装备部军用实验室认可以及国家计量认证的环境与可靠性实验室；

也是中国船级社、中国渔政、ISTA、GE等国内外知名组织和企业认可的环境与可靠性实验室。

场地设备

全国实验室面积近20000 m²，拥有先进的环境可靠性试验设备500多台套，其中三综合试验箱30台套，0.2 m³~475m³气候试验箱200多台套，推力1kN~350kN系列电动振动试验系统30多台套，以及全套沙尘试验、淋雨试验、高加速寿命试验和应力筛选设备等。

技术团队

集结培养了一支以专家和技术骨干为核心的专业技术队伍，环境可靠性技术研发和试验人员300多人，包括实验室资质认定评审员4名、研究员3名、高级工程师10名，博士6名、硕士80多人、在技术研究、工程技术应用和试验实操中均具有丰富的理论功底和工程经验，在开展科研开发的同时承担着国家、军队和地方多型号、技术复杂的产品环境可靠性试验任务。

科研开发

设有广电计量技术研究院环境可靠性技术研究所，依托与北京航空航天大学 and 国防科学技术大学的产学研战略合作，专业从事环境与可靠性试验标准化、可靠性分析、可靠性设计整改、可靠性试验、失效分析等相关领域的先行技术开发和技术运用研究。承担汽车、舰载设备、电工电子、柴油发动机、雷达、航空机载设备等领域科研项目20余项，申请专利100余项、发表论文200余篇，编写相关企业标准100余项。

服务网络

在全国建有广州、深圳、无锡、长沙、武汉、成都、重庆、北京、上海、天津、沈阳、青岛、西安等13个军民融合型环境可靠性试验室，以及30多个业务分公司，为国防军工、汽车、航空航天、船舶、轨道交通、通信、电子电器等行业和领域提供一站式、本地化的环境可靠性试验技术服务。

服务能力

同时满足IEC、ISO、GB、GJB、EIA、ASTM、IPC、ISTA、JEDEC、SAE、JIS、MIL等国际、国家及行业标准的测试要求，开展气候环境、机械环境、生物环境、化学环境和综合环境绝大多数项目的试验和测试，同时可提供整车环境试验，失效分析和元器件筛选，可靠性优化设计与分析，可靠性试验与评估，以及可靠性方案和整改建议等技术服务，可对试验中的产品及材料进行电学、磁学、表现性能监测。

GRGTEST is committed to environmental and reliability Testing researching and technical service providing from product developing to manufacturing. In order to help our clients improve the reliability, the stability, the environmental suitability and safety, and shorten the developing and producing time, we provide one-stop environmental and reliability testing solutions including the technology research and development, the design, the sample making and the quality guaranteeing.

The position status

The first choice for clients in the government, army and Civilian areas;

The environmental and reliability laboratory that has been accredited by CNAS, DILAC, military laboratory and CMA;

It has been approved by some famous organizations or enterprises around the world, such as CCS, China Fishery Law Enforcement Command, ISTA and GE.

Site Equipment

National laboratory area is nearly 20000 m2, with more than 500 sets advanced environment reliability test equipment, 30 sets three synthesis experiment box, more than 20 sets 0.2 m3~475m³ climatic testing box, more than 30 sets thrust force 1kN~350kN series electrically operated vibration test system, as well as complete set equipment for sand-dust test, rain test, high acceleration length-of-life test and stress screening and so on.

Technical Team

We have raised a specialized technical team of more than 300 environment reliability technician, including 4laboratory accreditation assessors, 3 researcher, 10senior engineers, 6 doctors, more than 80 masters, who has rich experience in technical research, engineering technical application and practical operating, they are undertaking national, army and place environment reliability test duty during scientific research and development.

Scientific Research &Development

Equipped with the environment reliable technical research institute of GRGT technical institute, depends on the strategic cooperation with Beijing University of Aeronautics and Astronautics and National University of Defense Technology, GRGTEST has engaged in environment and the reliability test standardization, reliability analysis, reliability design rectification and reliability testing, failure analysis and other related areas of advanced technology development and application.

It has undertaken more than 20 research projects, and applied more than 30 patents, published more than 20 papers, written the corporate standard more than 10 items in the field of automotive, ship-borne equipment, electronics, diesel engines, radar, airborne equipment, etc.

Service Network

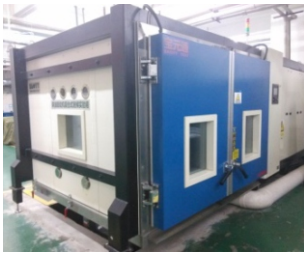
GRGTEST has built 13 military and civilian converged environment reliability laboratories and more than 30 business branches in Guangzhou, Shenzhen, Wuxi, Changsha, Wuhan, Chengdu,Chongqing, Beijing, Shanghai,Tianjin, Shenyang, Qingdao and Xi'an etc., so that we can provide a one-stop, localization environment reliability test technical services for defense and military, automotive, aerospace, shipping, rail transportation, communications, electronic appliances industries and fields.

Service Capacity

Meeting the international, national and industrial test requirements of IEC、ISO、GB、GJB、EIA、ASTM、IPC、ISTA、JEDEC、SAE、JIS、MIL、etc., it can carry out climate environment testing, mechanical environment testing, biological environment testing, chemical environment testing, most of comprehensive environment testing, automotive environmental testing, failure analysis and component selection, reliability optimization design and analysis, reliability test and evaluation, reliability plan and rectifying suggestion, can do electricity, magnetism, the apparent performance monitoring on products and materials in testing.

测试设备

发动机试验技术
Engine test technology



柴油发动机复合式耐候实验箱
Diesel engine composite weathering test chamber
5吨台+6立方
5t+6m3



柴油发动机复合式耐候实验箱
Diesel engine composite weathering test chamber
10吨台+10立方
10t+10 m3



柴油发动机复合式耐候试验箱
Temperature+Humidity+Pressure+Solar radiation composite diesel environment chamber

温湿试验技术
Temperature humidity test technology



温度冲击试验箱
Thermal shock chamber



快速温变箱
Temperature rapid change chamber



步入式交变湿热试验箱
Environmental Chamber

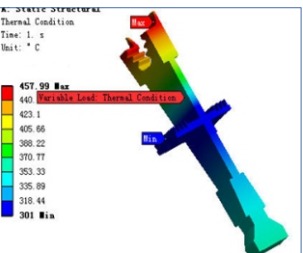
力学试验技术
Mechanical test technology



振动试验台
Vibrator



冲击试验台
Shock tester



虚拟力学试验技术
The virtual mechanical test technique

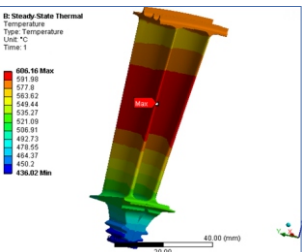
可靠性试验技术
Reliability test technology



三综合测试系统
Temperature + Humidity+ Vibration compositetest chamber

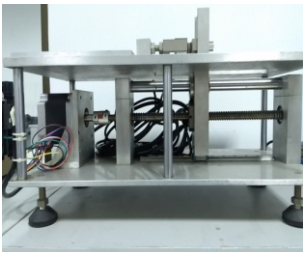


高加速寿命试验箱
HALT/HASS Chamber

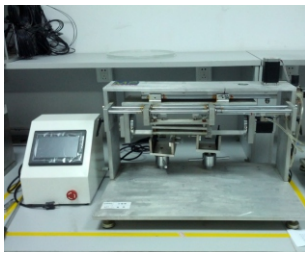


可靠性仿真技术
The reliability simulation technology

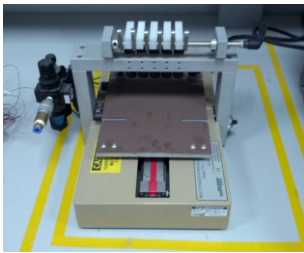
非标类试验技术
Non-standard test technology



电动卧式插拔疲劳测试机
Electric horizontal plug fatigue testing machine



汽车出风口疲劳试验机
The car outlet fatigue testing machine



五指刮擦试验机
Five fingers scratching testing machine



高压喷水测试装置
High pressure water spray test equipment



冷/热水高压清洗机
Cold/hot water high pressure cleaning machine



气体腐蚀试验箱
Mixed flowing gas chamber

其它环境试验技术
Other environmental testing technology



淋雨试验箱
Box rain test chamber



霉菌试验箱
Mould test chamber



循环盐雾腐蚀试验箱
Cyclic salt spray corrosion test chamber



冰水冲击试验机
Ice water impact testing machine



军用设备检测体系

可靠性与环境试验中心拥有**30**余台套模拟军用设备环境应力的设备，具备多台单机产品并进试验的能力，提供试验方案设计、试验实施及试验结果判定的一站式服务。

特点

开展军用设备产品的环境试验、可靠性鉴定试验及可靠性验收试验，针对不同产品，量体裁衣，为客户提供合理的可靠性测试大纲、加速寿命试验方案、可靠性评估方案等，从而评估产品的MTBF值，保障产品的可靠性。

能力

- 通过专家级设计评审和改进建议，帮助企业顺利通过测试指标。
- 当企业面临设计产品不成熟、设计指标不达标，从而导致产品被拒绝交付时，通过环境试验，可以有效地发现设计阶段的可靠性薄弱点，推动设计改进提升。
- 通过故障模式及故障机理的归纳，结合FMECA、FRACAS等多种可靠性工具，帮助企业快速有效地解决设计缺陷及薄弱点，通过可靠性鉴定及验收试验，提高产品的可靠性。
- 同时，针对传统试验不足以满足产品的研制及试验需求，为企业提供加速寿命试验方案及可靠性评估方案，优化产品的研发和试验设计，确定产品极限值，强化和筛选条件，节省和优化资源利用。
- 测试标准，环境试验满足GJB150及GJB150A系列标准、GJB460B、GJB548B、GJB367A-2001、GJB4系列标准等，可靠性试验满足GJB899A-2009、GJB1046-1992、GJB1032-1990等标准。
- 试验能力：振动、冲击、摆锤冲击、高温、低温、温度冲击、湿热、盐雾、霉菌、砂尘、淋雨、太阳辐射、低气压、温湿振三综合、温湿高三综合、环境应力刷选、可靠性鉴定、可靠性验收等。

典型应用

主要针对军用设备类产品的设计、定型、鉴定、验收阶段，设备类产品覆盖海装、空装、陆装。

代表客户

54所、34所、20所、30所、7所、大唐、中科院、716厂、714厂、万江机电、太原航空仪表、惠阳螺旋桨厂、沈飞等。

主要设备 Major Equipment



机械冲击台
Mechanical shock tester



三综合测试系统
Temperature + Humidity + Vibration composite test chamber



倾斜、摇摆试验台
Tilt, swing tester



摆锤冲击台
Pendulum impact machine



沙尘试验箱
Dust Chamber

Military Equipment Test System

Reliability and environmental test center has more than 30 devices, which can simulate the environment stress of military equipment. It has the ability to test several products at the same time, and provide the one-stop service with the design of experiment project, the implementation and the judgement of test results.

Characteristics

To carry out environmental testing and reliability testing for qualification and production acceptance for military equipments, according to different products, act according to actual circumstances, reasonable to provide for the customer Test outline, the accelerated life test plan and reliability evaluation scheme, etc., to assess MTBF value of products, guarantee the reliability of the product.

Ability

Through the design of the expert review and suggestion, help enterprises to pass the test.

When enterprises face the product is not mature, design index is not up to standard, resulting in the product is refused to pay. by environmental test, it's effectively to find the reliability of the design phase vulnerabilities, and push the design improvement.

Through failure mode and failure mechanism of induction, combined with FMECA and FRACAS reliability tools, it's very quickly and efficiently to help enterprises solve the design flaws and vulnerabilities, and through the reliability appraisal and acceptance test, improve the reliability of products.

At the same time, in view of the traditional test is not enough to meet the demand of product development and testing, we can provide enterprises with accelerated life test plan and reliability evaluation, optimization of product research and design of experiment, determine product limit value, strengthen and filter condition, save and optimize resource utilization.

Environment test standard, it's satisfied GJB150 and GJB150A series, GJB460B, GJB548B, GJB367A-2001 and GJB4 series standards, such as reliability test, GJB1046 GJB899A-2009-2009, GJB1032-1990 standard, etc.

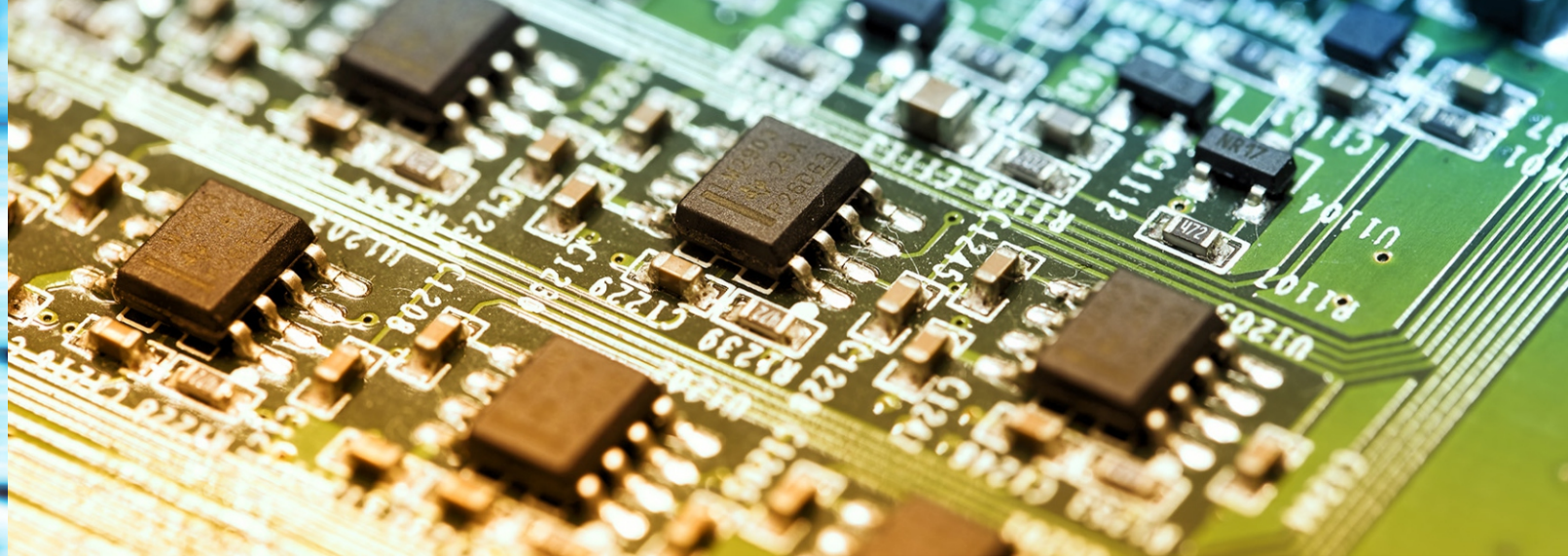
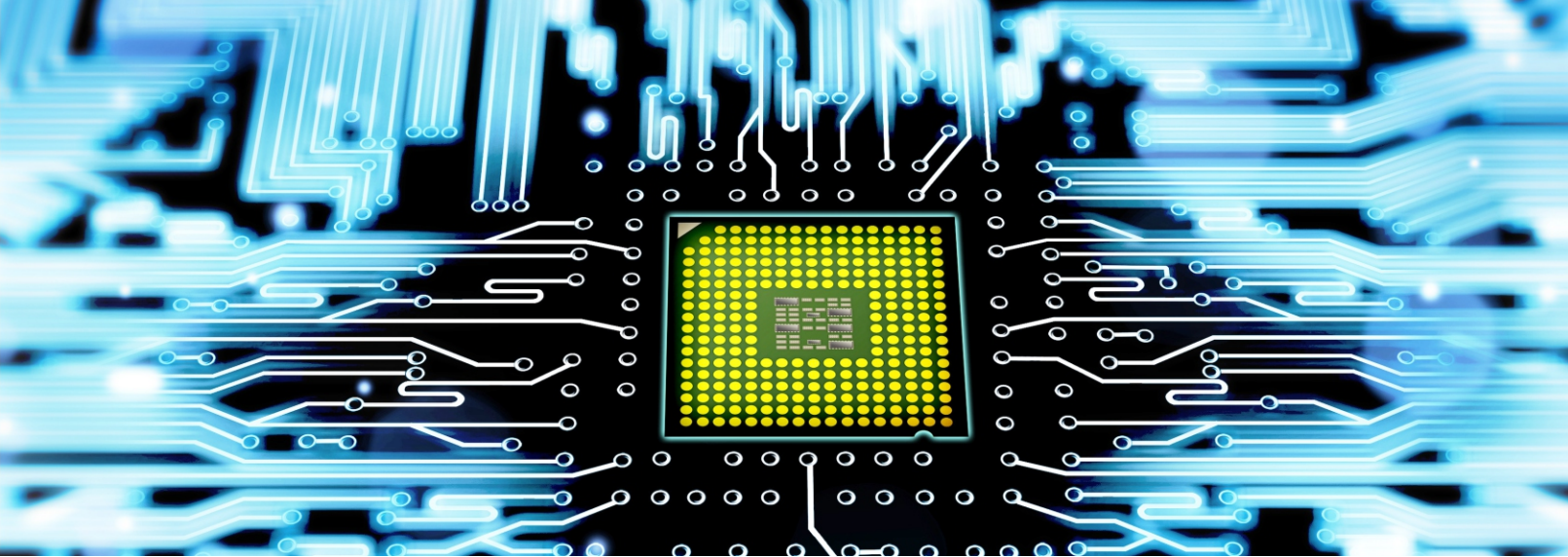
Test capability: Vibration, Impact, Pendulum Impact, High temperature, Low temperature, Temperature Shock, Humidity, Salt Fog, Fungus, sand and dust, Rain, Solar radiation, Low pressure, Temperature-humidity-vibration, Temperature-humidity-altitude, Environment stress screening, reliability evaluation, reliability test, etc.

Typical Application

Mainly aims at the design of military equipment products, finalize the design, verification, acceptance stage, equipment products cover sea, air, land.

Representative Customers

54 Research Institute of China Electronic Technology Group Corporation.
34 Research Institute of China Electronic Technology Group Corporation.
20 Research Institute of China Electronic Technology Group Corporation.
30 Research Institute of China Electronic Technology Group Corporation.
7 Research Institute of China Electronic Technology Group Corporation.
Datang Linktech Infosystem Co., Ltd. Shanghai Institute of Microsystem and Information Technology.
716 factory, Shareco Co., Ltd.
714 factory, Shareco Co., Ltd.
Wanjiang Electromechanical Co., Ltd.
Taiyuan aviation instrument Co., Ltd.
Huiyang Aviation Propeller Co., Ltd.
Changzhou Purcell Co., Ltd.
Shenyang aircraft industry group Co., Ltd.



元器件检测

特点

高效、快速的产品可靠性筛选方案，筛选出早期故障产品，提高产品质量及可靠性。

能力

- 根据不同的筛选需要，选择合适的筛选策略，提高产品的可靠性。
- 试验设备：**我中心为企业提供定制专用的量产筛选设备，如电容器高温老练检测系统、集成电路高温动态老练系统、高温反偏老练检测系统等，能提供：4个老炼实验区、16个试验通道、3328个试验工位、老炼试验电源10台、电压范围0V~1500V、漏电流检测范围100nA~50mA。
- 试验项目：**电阻二次筛选和电容器二次筛选等。
- 测试标准满足GJB、AEC、MIL-STD等标准的要求。

典型应用

- 在研发设计转入定型量产阶段时，基于有效的应力筛选参数选择，可以有效地减少售后产品早期故障及关键零部件可靠性控制。

代表客户

- 52所、14所、江苏宏基环电有限公司、天津七六四通信号航技术有限公司、江苏晟楠电子科技有限公司等。

主要设备

Major Equipment



集成电路高温动态老炼系统
IC high temperature dynamics system



高温反偏老炼检测系统
High temperature reverse bias sophisticated detection system



电容器高温老炼检测系统
Capacitors for high temperature aging test system

Stress Screening of Electronic Components

Characteristics

Efficient and fast screening program of product reliability, screening out the early failure products, improve product quality and reliability.

Ability

According to different needs, select the appropriate screening strategies to improve the reliability of the product.

Test equipment: GRGTC provide screening equipment when customized production for enterprises, such as capacitors for high temperature test system, IC high temperature dynamic system, high temperature reverse bias sophisticated detection system etc., those equipment can provide: 4 ageing experiment areas, 16 test channels, 3328 test stations, 10 sets of burn-in test power, voltage range 0V~1500V, leakage current detection range 100nA~50mA.

The test project: Resistance screening and capacitor screening, etc.

Meet the requirements of GJB, AEC, MIL-STD, etc.

Typical Application

When R&D design is transferred to the stage of mass production, the selection of effective stress screening parameters can effectively reduce the early failure and reliability control of key parts.

Representative Customers

52 Research Institute of China Electronic Technology Group Corporation.

14 Research Institute of China Electronic Technology Group Corporation.

Jiangsu Hongji ring Electric Co., Ltd.

Tianjin 764 Communication Navigation Technology Co., Ltd.

Jiangsu Sheng Nan Electronic Technology Co., Ltd.



整车车辆测量试验系统

特点

提供室内道路车辆道路模拟，轮式车辆质心测定及整车重量、轴荷分配、外形尺寸、几何尺寸的测量。

能力

- 车辆道路模拟试验系统是华中地区唯一、且全国少有的能提供对外检测的用于室内车辆道路模拟试验的系统，同时对于30t以下车辆的质心位置、轴载分配、整车重量测量，重复性精度优于5%。
- 试验设备：整车室内道路模拟试验系统、整车红外光照耐久试验系统、车厢热传导系数自动测试系统、四门两盖耐久测试系统等。
- 试验项目：装置耐久性试验、动态性能试验、结构件振动试验。
- 满足的测试标准：环境试验满足GJB150及GJB150A系列标准以及企业标准。

典型应用

应用于车辆的设计改进及定型。

代表客户

6907厂、3303厂、568厂、9603厂、710厂、834厂、722所、38所、武汉客车厂、东风越野车等。

主要设备

Major Equipment



整车室内道路模拟试验系统
Indoor road simulation test system
for vehicle



整车红外光照耐久试验系统
Infrared light endurance test system
for vehicle



车厢热传导系数自动测试系统
Carriages on the heat transfer
coefficient of automatic test system



四门两盖耐久测试
Four doors and two cover durability
test system

Vehicle Measurement Test System

Characteristics

Provide indoor road vehicle road simulation and measure the wheeled vehicle mass center, the vehicle weight, the size of the axial load distribution, shape, geometry size.

Ability

Our test base is the only test base in the center China and the few in China which can provide external detection in vehicle road simulation. the repeatability accuracy is above the average 5% in the same profession for measuring the vehicle mass center, the vehicle weight and the vehicle.

Test equipment: Indoor road simulation test system for vehicle, Infrared light endurance test system for vehicle, Carriages on the heat transfer coefficient of automatic test system, Four doors and two cover durability test system.

The test project: device durability test, dynamic performance test, structural vibration test.

Meet the standards of GJB150 and GJB150A, company standards, etc.

Typical Application

Apply to the design improvement and design profile for vehicle.

Representative Customers

6907 factory.

3303 factory, 568 factory.

710 factory, 834 factory.

722 research institution of China Electronic Technology Group Corporation.

38 research institution of China Electronic Technology Group Corporation.

Wuhan bus factory.

Dongfeng SUV.



高度测试体系

特点

考核航空航天装备、电子元器件或其他产品在低气压、过压、温湿度综合应力作用下的可靠性，可开展低气压试验、高低温低气压试验、快速减压试验、过压试验等试验项目。

能力

- 针对产品不同安装位置及任务阶段，可开展不同温湿度及高度的试验，温度范围覆盖-70℃至150℃，气压范围覆盖0.2KPa至101KPa。
- 我中心自主研发的可程式高气压试验系统，能够实现气压升降速率程控、气压值程控、反馈调节等程控要求，解决现有航空产品高气压试验工装/设备普遍存在的气压曲线不受控、气压值手动调节精度低，自动化程度低等不足，气压覆盖标准大气压至400KPa。
- 试验箱包含高低温低气压试验箱、可程式高气压试验系统等。
- 检测标准满足GJB、GB/T、DO160等。
- 试验能力：**高度（低气压）、快速减压、过压、温湿高三综合等。

典型应用

适用于航空机载类产品，主要有：

在飞机增压舱或非增压舱中运输或工作的装备；

暴露于快速减压环境中的的装备；

在飞机外部挂飞的装备。

代表客户

万江机电、太原航空仪表、惠阳航空螺旋桨、常州赛尔、沈阳飞机工业集团、中国商用飞机有限责任公司、西安飞机工业集团、新乡航空、185厂、喜乐航、深圳智讯云端等。

主要设备 major equipmet



高低温低气压试验箱
Temperature and low
pressure test chamber



可程式高气压试验系统
Programmable high pressure test system

Altitude Test System

Characteristics

Assessment of aerospace equipment, electronic components and other products in low pressure, overpressure, the reliability of comprehensive stress under the action of temperature and humidity, can carry out pressure test, Temperature and Low pressure test, Rapid decompression, overpresure test, etc.

Ability

Aimed at product different stages of installation position and task, it's could develop different Temperature-humidity and Altitude of the test, the temperature range covers - 70℃ to 150℃, pressure range covers 0.2 kPa to 101 kPa.

The center of independent research and development program of high pressure test system, can realize the barometric rate SPC, pressure value programmed control, feedback control, such as SPC requirements, solve the existing air products high pressure test tooling/equipment widespread pressure curve is not controlled manually adjusted, pressure value, low accuracy, low degree of automation, cover normal atmospheric pressure to 400 kPa pressure.

Test chambers containing Temperature and low pressure chamber, high pressure test system, etc.

Testing standards meet the GJB, GB/T, DO160, etc.

Experiment ability: Altitude (low presure), Decompression, Overpresure, Temperature-humidity-altitude, etc.

Typical Application

Suitable for airborne products, mainly include:

The equipment in aircraft pressurization tank or pressurized tank transporting or working;

The equipment that exposure to rapid decompression in the environment;

The aircraft was flying outside hang equipment.

Representative Customers

Wanjiang Electromechanical Co., Ltd.

Taiyuan aviation instrument Co., Ltd.

Huiyang Aviation Propeller Co., Ltd.

Changzhou Purcell Co., Ltd.

Shenyang aircraft industry group Co., Ltd.

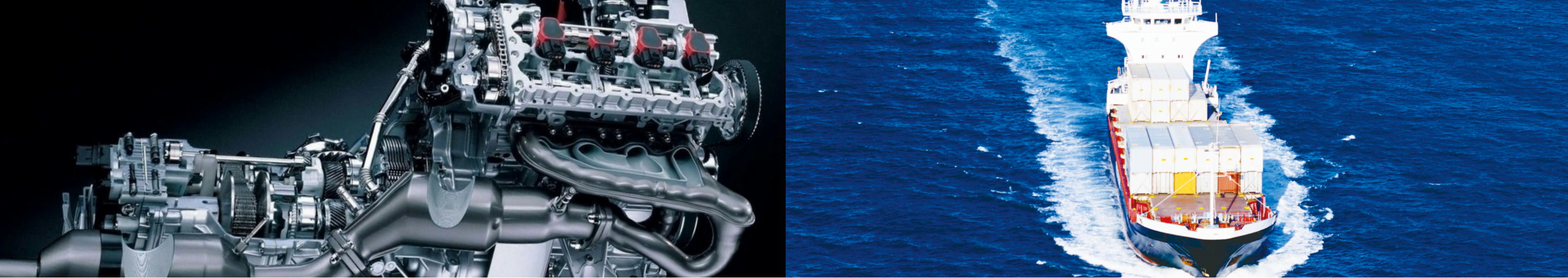
China commercial aircraft Co., Ltd.

Xi'an Aircraft Industrial Group.

Xinxiang aviation Co., Ltd.

185 factory, Shareco Co., Ltd.

Shenzhen Zhixun cloud Co., Ltd, etc.



发动机类试验系统

特点

测定发动机类型产品的MTBF值，提升发动机可靠性。

能力

- 我中心自主研发的柴油机综合测试系统（温度-湿度-振动三综合），通过专家级评审和改进建议，帮助发动机厂商顺利通过认证要求测试。
- 与常规三综合试验箱相比，本三综合试验箱能较好的解决发动机的进排气问题，同时，能够完美的在室内模拟发动机的使用环境，弥补传统发动机试验室内环境试验及可靠性试验的空白。

典型应用

- 主要针对发动机产品的定型、鉴定、验收阶段。

代表客户

- 山东吉美乐有限公司、江西泰豪军工集团有限公司、福州马尾闽东新科技工业有限公司、重庆华伟联龙科技有限公司、德国赫驰动力公司等。

Engine Test System

Characteristics

Improve the reliability of engines through to measure the MTBF value of engine types of product.

Ability

Through to experts evaluation and improvement suggestions, our center research two types of diesel engine integrated test system in order to assist engine manufactures in reliability test.

Compared with usual GPH, our diesel engine integrated test system can better solve intake and exhaust problems for engine, meanwhile, it can perfect simulate the use environment of engine in indoor and make up for the traditional engine test of indoor environment test and reliability test.

Typical Application

Aimed at engine products stereotypes, appraisal and acceptance stage.

Representative Customers

Shangdongjimeile Co., Ltd.

Jiangxi tellhow military industrial group Co. LTD.

Fuzhou mawei mindong new science and technology industrial Co., LTD.

Chongqing huawei group dragon technology Co., LTD.

German Hatz dynamics company, etc.

船级社及渔政局试验体系

特点

适用于船舶和海上设备，可根据产品结构、安装位置、使用条件及客户需求等，为客户提供合理有效的试验方案、失效分析及整改方案，保障客户产品质量。

能力

- 通过分析结构、安装位置、实际使用情况等，提供相应的试验方案，合理地评估导航和无线电通信设备及系统。
- 试验项目：低温、湿热、高温、倾斜和摇摆、盐雾、振动、冲击、绝缘耐压、外观检查、外壳防护等。
- 试验设备：高低温湿热试验箱、高温箱、倾斜和摇摆试验台、盐雾试验箱、电磁振动台、冲击试验台、绝缘耐压仪、金相显微镜、外壳防护试验箱等。
- 符合测试标准:包括IEC 60945-2002、GB/T 12267-1990、GD-01、IEC 60068等。

典型应用

用于船舶电子产品及材料试件，产品有上导航设备、无线电通信设备等。

代表客户

广船国际、海华、中星测控等。

Classification Society And Fishery Bureau Test System

Characteristics

Apply to vessels and offshore equipment. According the product structure, installation position, condition of use and customer demand to provide the customer with reasonable and effective test scheme, failure analysis and improvement scheme and guarantee the product quality.

Ability

By analyzing the structure, installation position, actual usage, etc., to provide the corresponding test scheme and reasonably assess navigation and radio communications equipment and systems.

Test item: low temperature, damp and hot, high temperature, tilt and swing, salt spray, vibration, shock, insulation, appearance inspection, protection, etc.

Test equipment: high and low temperature test chamber, high temperature chamber, tilt and swing test table, salt spray test chamber, electromagnetic vibration table, shock tester, insulation apparatus, metallographic microscope, protection test chamber, etc.

Meet the standards including IEC 60945-2002, GB/T 12267-1990, GD-01, IEC 60068, etc

Typical Application

Used in electronic products and material specimens of the ship, such as Marine navigation equipment, radio communications equipment, etc.

Representative Customers

GuangChuan international, Haihua, Zhongxing measurement and control, etc.



高原装备试验系统

特点

能够同时开展温度-湿度-高度-太阳辐射四综合试验。

能力

- 我中心自主研发的高原装备试验系统（温度-湿度-高度-太阳辐射四综合），通过专家级设计、评审和改进建议，弥补了国内高原环境室内试验空白。
- 目前，随着经济的发展，大部分国家对高原用装备提出了更高的要求，而企业设计出的产品需满足高原环境这一特殊环境的要求。
- 为降低产品后期故障频率，减少安全问题，企业需要在产品设计、定型等阶段着重关注产品的使用环境。广电计量组成的高原装备试验评审小组，满足企业需求的同时，为企业提供问题定位及试验解决方案，从而推动高原用装备的设计改进提升。
- 试验能力：温度-高度、温度-湿度-振动三综合、温度-湿度-高度-太阳辐射四综合等。

典型应用

主要针对高原用装备的定型、验证阶段，如发动机类、电子元器件类等在高海拔地区贮存/工作的装备。

代表客户

济南吉美乐电源技术有限公司、江西泰豪军工集团有限公司、福州马尾闽东新科技工业有限公司、重庆华伟联龙科技有限公司、德国赫驰动力公司等。

主要设备 major equipmet



复合式耐候试验箱
Temperature+Humidity+Pressure+Solar
radiation composite diesel environment
chamber

Plateau And Equipment Test System

Characteristics

Simulate conduct temperature-humidity - altitude -solar radiation test.

Ability

The center of independent research and development of diesel engine weathering experiment chamber (temperature - humidity - altitude - solar radiation), through the expert design, review and improvement Suggestions, make up the domestic blank plateau environment indoor experiment.

At present, with the development of economy, most countries use equipment put forward higher requirements on the plateau, and design of the products to meet the requirements of plateau environment this special environment.

Late to reduce product failure frequency, reduce the security problem, the enterprises need in product design, shape stage focused on products such as the use of the environment. The evaluation group, made up of GRGTest experts, meet the demand of enterprises at the same time, provide enterprises with problem to locate and test solution, with the design of the equipment and improve so as to promote the plateau.

Experiment ability: temperature-altitude, temperature-humidity-vibration, temperature - humidity - altitude -solar radiation, etc.

Typical Application

Finalize the design, validation phase of plateau with equipment, such as the engine at high altitudes, electronic components etc storage/working equipment.

Representative Customers

Jinan jimerlot power supply technology co., ltd.

Jiang Xitai hao military industrial group co., ltd.

Fuzhou mawei mindong new science and technology industrial co., ltd.

Chongqing huawei group dragon technology co., ltd.

German Hatz dynamics company, etc.



航空机载类测试体系

可靠性与环境试验中心拥有30余台套设备模拟航空机载类产品的环境应力。为有效保证试验数据、产品的安全及降低试验风险，试验设备都具备报警、数据显示及保存，历史数据回放等功能。

特点

开展航空机载类产品的环境试验、可靠性鉴定试验及可靠性验收试验，为客户提供合理的可靠性测试大纲、加速寿命试验方案、可靠性评估方案等，从而评估产品的MTBF值，保障产品的可靠性。

能力

- 通过专家级设计评审和改进建议，帮助企业顺利通过测试指标。
- 当企业面临设计产品不成熟、设计指标不达标，从而导致产品被拒绝交付时，通过环境试验，可以有效地发现设计阶段的可靠性薄弱点，推动设计改进提升。
- 通过故障模式及故障机理的归纳，结合FMECA、FRACAS等多种可靠性工具，帮助企业快速有效地解决设计缺陷及薄弱点，通过可靠性鉴定及验收试验，提高产品的可靠性。
- 针对传统试验不足以满足产品的研制及试验需求，为企业提供加速寿命试验方案及可靠性评估方案，优化产品的研发和试验设计，确定产品极限值，强化和筛选条件，节省和优化资源利用。
- 试验设备：**具有温湿度试验箱、三综合试验系统、冲击试验台、淋雨试验系统、砂尘试验箱、高低温低气压试验箱等；
- 试验项目：**振动、冲击、高温、低温、温度冲击、湿热、霉菌、淋雨、太阳辐射、低气压、温湿振三综合、温湿高三综合、可靠性鉴定、可靠性验收等。
- 满足测试标准:** 环境试验满足GJB150及GJB150A系列标准、DO-160系列标准等，可靠性试验满足GJB899A-2009等标准。

典型应用

主要针对航空机载类产品的设计、定型、鉴定、验收阶段。

代表客户

万江机电、太原航空仪表、惠阳航空螺旋桨、常州赛尔、沈阳飞机工业集团、中国商用飞机有限责任公司、西安飞机工业集团、新乡航空、185厂、喜乐航、深圳智讯云端等。

Airborne Equipment Test System

Reliability and environmental test center has more than 30 devices, which can simulate the environmental stress of airborne products. In order to effectively guarantee the test data, the safety of the product and reducing the test risk , the test devices have the functions of alarm, data display and save, historical data playback, etc.

Characteristics

To carry out airborne product environmental testing, reliability evaluation test and reliability acceptance test, for customers to provide reasonable reliability testing syllabus, accelerated life test program, reliability evaluation scheme to assess products MTBF value, to improve the reliability of products

Ability

Through expert design review and improvement suggestions, help enterprises to pass the test index.

When enterprises are facing product design is not mature, design target is not up to the standard, which cause the product to be refused to deliver. Through the test environment, can effectively find weak point of the reliability of the design stage, and promote the design improvement.

Through induction of the failure mode and failure mechanism, combined with FMECA, FRACAS and other reliability tools, help enterprises to quickly and effectively solve design defects and weak points, through the reliability evaluation and acceptance test and improve the reliability of the product.

For traditional test is not sufficient to meet the product development and test requirements, can provide accelerated life test program and reliability assessment scheme for enterprises, optimization of product development and design of experiment, to determine the value of the product limit, strengthening and screening conditions, saving and optimizing the use of resources.

Test equipment with temperature and humidity test chamber, Vibration & Temperature & Humidity composite test chamber, mechanical shock tester, rain test system, sand and dust test system, temperature and low pressure test chamber and so on.

The test project: vibration test, impact test, high temperature test, low temperature test, temperature shock test, Temperature & humidity test, mildew test, rain test, the sun radiation test, low air pressure test, Vibration & Temperature & Humidity composite test, temperature and humidity low pressure test, reliability assessment test and reliability acceptance test.

Meet the environmental test standards of the GJB150 and GJB150A series, DO-160 series, reliability test standards of the GJB899A-2009 and other standards.

Typical Application

Mainly aimed at the stage of design, setting, appraisal and acceptance of airborne equipment.

Representative Customers

Wanjiang Electromechanical Co., Ltd.

Taiyuan aviation instrument Co., Ltd.

Huiyang Aviation Propeller Co., Ltd.

Changzhou Purcell Co., Ltd.

Shenyang aircraft industry group Co., Ltd.

China commercial aircraft Co., Ltd.

Xi'an Aircraft Industrial Group.

Xinxiang aviation Co., Ltd.

185 factory.

Shareco Co., Ltd.

Shenzhen Zhixun cloud Co., Ltd, etc.



汽车电子电器类测试体系

可靠性与环境试验中心拥有**60**余台套设备可对汽车电子电器产品环境适应性和可靠性进行模拟。设备具有实时显示数据、保存数据、历史数据调用、报警等功能，能有效保证试验数据，降低试验风险。

特点

本中心具备气候类试验、机械类试验、综合类试验、电性能试验以及寿命试验的试验能力及资质，可为汽车电子电器产品设计验证（DV）与生产验证（PV）提供完备的测试服务，充分保障产品的环境适应性与可靠性。

能力

- 通过模拟汽车电子电器产品在实际贮存、使用过程中可能遭受的气候环境和机械环境，可帮助客户在设计和生产阶段快速有效的提升产品性能，顺利实现投产。
- 针对测试标准或试验方案模糊的客户，可根据客户产品类型及测试经验制定并推荐测试方案，为客户提供全方位测试服务。
- 试验设备：温湿度试验箱、三综合试验系统、冲击试验台、淋雨试验系统、砂尘试验箱、高低温低气压试验箱，绝缘耐压仪等。
- 试验项目：气候类试验（高低温测试、快速温变测试、冷热冲击测试、恒温恒湿测试、温度循环测试、交变湿热测试、温湿度组合循环测试、盐雾测试、IP等级测试、UV光老化测试、碳弧灯光老化测试、氙灯光老化测试、气体腐蚀测试、低气压测试、臭氧老化测试、整车红外测试），机械类试验（随机振动、正弦振动、碰撞、跌落、机械冲击、碎石冲击），综合类试验(温度+湿度+振动三综合试验),耐久类试验（插拔力测试、磨损测试），电性能试验等。
- 测试标准满足TL226、VW80000、GMW3172等各大车厂标准，以及ISO 16750系列、ISO 20653道路防护等级等各类国标国内标准。

典型应用

汽车线束，包括线束耐久、耐温湿度变化、耐工业试剂等试验

连接器，包括机械强度、电气特性、耐气候环境、耐机械环境等试验

车载电子产品，包括车载导航、倒车雷达耐气候、耐机械环境等试验

代表客户

广汽、吉利等主机厂；法雷奥、航盛电子、好帮手、同致电子、新李汽车等供应商。

Automotive Electronics Test System

Reliability and environmental test center has more than 60 sets of devices for the environmental adaptability and reliability simulation of automotive electrical and electronic products. Devices with the functions of real-time displaying datas, saving datas, calling history datas, alarm and so on, can effectively guarantee the test datas and reduce the test risk.

Characteristics

GERTC has the experimental ability and qualification of climate test, mechanical test, integrated test, performance test and life test, which can provides comprehensive testing services for automotive electronic products design verification (DV) and production validation (PV), fully guarantees the environmental adaptability and reliability of the products.

Ability

By simulation the climate environment and mechanical environment of auto electronic products in the actual storage and use process may suffer from, which can help customers quickly and effectively improve product performance in the design and production stage, and put into production successfully.

In view of ambiguous customer test standard or test scheme, GERTC recommends and provides suitable test scheme to customers with comprehensive testing services according to the customer the product type and testing experience.

Test equipment: temperature and humidity test chamber, Vibration & Temperature & Humidity composite test chamber, mechanical shock tester, rain test system, sand and dust test system, temperature and low pressure test chamber, Dielectric withstand voltage tester and so on.

Test items: Climate tests (High/low temperature test, rapid change temperature test, thermal shock test, constant temperature and humidity test, temperature cycle test, alternating hot and humidity test, temperature and humidity combined cycle test, salt spray test, IP grade test, UV light aging test, carbon arc light aging test, xenon lamp aging test, gas corrosion testing, low pressure test, ozone aging test, the vehicle infrared testing), Mechanical tests (Random vibration、sine vibration, bump test, drop test, mechanical shock test, gravel impact test), Comprehensive tests (Temperature/humidity and vibration test), endurance test (insertion force test, abrasion test), Electric performance tests (insulation resistance, insulation and voltage resistance, contact resistance, capacitance and inductance measurement).

Test standards meet each big factory standards TL226, VW80000, GMW3172, as well as ISO 16750 series, ISO 16750 road protection grade and other kinds of GB standard.

Typical Application

Automotive wiring harness, including wiring harness endurance test, heat humidity change resistance test, industrial reagent resistance test, etc.

Connector, including mechanical strength test, electrical properties test, climate resistance test, mechanical resistance test, etc.

Automotive electronic products, including car navigation, parking sensor tests of climate resistance test, mechanical resistance test, etc.

Representative Customers

GAC Group.

GEELY.

Valeo.

Hangsheng.

Coagent.

Tung Thih Electronic.

Guangzhou New Lee.



汽车内外饰件测试体系

可靠性与环境试验中心拥有40余台套汽车内外饰测试设备，具备进行非标试验和非标测试设备开发的能力，为客户提供完善的一站式测试服务。

特点

针对涂镀层产品，本中心拥有一批高分子材料试验机，可开展一系列磨耗类、光老化类、气体腐蚀类等试验，以考核评估涂镀层耐机械环境、耐气候环境性能。

能力

- 通过磨耗、冲击、光老化、腐蚀等环境试验，可有效检验产品涂镀层的耐机械环境、耐气候环境各项性能指标，帮助客户发现产品设计缺陷，从而改善和提高涂镀性能。
- 针对非标类测试，根据客户测试需求设计测试工装，合理制定测试方案，最终帮助客户完成测试项目，解决非标类测试难题。
- 试验设备：太阳辐射箱、紫外试验箱、碳弧灯试验箱、氙弧灯试验箱盐雾腐蚀、气体腐蚀（H₂S、SO₂、NO₂、Cl₂）、臭氧腐蚀、饱和湿度耐久性能等。
- 试验项目：RCA纸带耐磨测试、五指刮擦测试、泰伯尔滚动磨耗测试、酒精橡皮耐磨测试、摩擦色牢度测试、漆膜冲击、杜邦冲击、落球（落锤）冲击、碎石冲击、摆锤冲击（悬臂梁、简支梁）、光老化试验、盐雾腐蚀、气体腐蚀（H₂S、SO₂、NO₂、Cl₂）、臭氧腐蚀、饱和湿度耐久。
- 测试标准满足GJB、GB/T、ISO、ASTM、SAE等。

典型应用

汽车内外饰件、塑料、橡胶、纺织品等。

代表客户

德赛西威，银宝山新，乔丰科技，新晨，华益盛等。

Automotive Exteriors Test System

Reliability and environmental test center has more than 40 sets of devices to test the inside and outside trims of car. It has the ability to carry out the non-standard test and develop non-standard device, and provides the customers with perfect one-stop test service.

Characteristics

Products for coatings, GERTC has a group of high polymer material testing machine, can carry out a series of abrasion, light aging, gas corrosion test, , in order to evaluate coatings performance resistance to mechanical environment climate environment.

Ability

By abrasion test, impact test, light aging test, corrosion test and other environmental tests, which can effectively test coatings products various performance indicators resistance to mechanical environment and climate environment, and help customers find product design defect, so as to improve and enhance performance of plating.

For non-standard test, design testing fixtures and establish reasonable test scheme according to the customer demand, eventually help customers complete the test project, solve non-standard class test problems.

est equipment: such as solar radiation chamber, UV chamber, carbon arc test chamber, xenon arc lamp test chamber, etc.

Test projects: RCA tape wear-resistant test, five fingers scratching test, taber rolling abrasion test, alcohol rubber abrasion test, friction fastness test, light aging test, salt fog corrosion, gas corrosion (H₂S, SO₂, NO₂, Cl₂), ozone corrosion, saturated humidity resistance, etc.

Test standards meet GJB、GB/T、ISO、ASTM、SAE, etc.

Typical Application

Car inside and outside decoration, plastic, rubber, textile, etc.

Representative Customers

Desay SV.

Shenzhen silver basis technology co., Ltd.

Qiao Feng Technology Industrial (Shenzhen) Co., Ltd.

Brilliance Technology.

HYS mould.





包装类产品测试体系

可靠性与环境试验中心拥有20余台套包装类产品测试设备，能为各类包装件提供齐全的测试服务，保证产品质量。

特点

本中心拥有广州市运输包装检测重点实验室，针对产品运输包装可开展环境试验、堆码试验、装卸试验、振动试验、冲击试验等试验，具备试验种类齐全，适用产品类型广等特点，可发掘运输包装缺陷，充分保障产品包装运输可靠性。

能力

- 可通过模拟产品在实际使用、装卸以及运输过程中承受的机械环境，确定产品的适应性和完好性，从而帮助客户快速发现和解决运输过程中可能面临的问题。
- 本中心拥有大推力振动台，最大推力35t，可为大质量大尺寸产品测试通过可靠保障。
- 试验设备：跌落式冲击试验台、碰撞试验台、跌落试验机、水平冲击试验台、包装压力机、包装夹持试验机、模拟汽车运输振动台、斜面冲击台。
- 试验项目：振动试验、堆码试验、装卸试验、冲击试验等。
- 测试标准满足ISTA系列、ASTM、FedEx以及相关国标、企业标准。

典型应用

液晶电视、箱柜等运输包装件

代表客户

格力、美的、GE、华为、奥林巴斯、TCL、瑞仪光电等

Product Packaging Test System

Reliability and environmental test center has more than 20 devices for packaging products, which can provide complete testing services for all kinds of packages to ensure the quality of products.

Characteristics

GERTC has the Guangzhou key laboratory for product transport packaging, which can carry out environmental test, stacking test, loading and unloading test, vibration test, impact test and other test, with complete test kinds and widely applicable for the product type, can discover the transport packaging defects, and fully guaranteed product transportation packaging reliability.

Ability

By simulating the mechanical environment in actual use, handling and transportation process, which can determine the adaptability and reliability of products, and finally help customers quickly find and solve problems may face in the process of transportation.

GERTC has the big thrust vibration table, the maximum thrust 35t, can guarantee the test for large size product with big weight.

Test equipment: mechanical shock tester, bump tester, drop tester, horizontal impact tester, package compressor, package clamping machine, motor transport vibration table, impact, etc.

Test items: Vibration test, stacking test, loading and unloading test, impact test, etc.

Test standards meet ISTA series, ASTM, FedEx and relevant national standard, enterprise standard.

Typical Application

LCD TV, bin transport package.

Representative Customers

GREE, Midea, GE, HUAWEI, Olympus, TCL, Radiant Opto-Electronics Corp.



轨道交通试验体系

特点

针对轨道交通产品的结构、安装位置、使用条件及客户需求等进行综合分析，并结合有限元分析方法，为客户提供合理有效的试验方案、失效分析及整改方案，以保障客户产品质量。

能力

- 根据不同轨道交通产品的特点及实际使用情况，并结合有限元分析，针对性地为客户产品提供合理有效的试验方案。
- 针对失效产品进行材质成分分析、金相组织结构分析、材料受力分析、断口类型分析和硬度分析等测试，找到对应的失效原因，并提供相应的整改方案。
- 试验项目：低温、湿热、高温、过电压、盐雾、振动、冲击、应力筛选、绝缘耐压、外观检查等。
- 试验设备：高低温湿热试验箱、高温箱、直流电源、交流电源、盐雾试验箱、电磁振动台、冲击试验台、绝缘耐压仪、金相显微镜等。
- 符合测试标准：国内标准包括GB/T21653-2008、GB/T25119-2010、TB/T 3058-2002、TB/T3051.1-2009等，国外标准包括IEC61373-2010、BSEN61373、BSEN50155:2007、IEC60571:2006等。

典型应用

适用于机车的整机、模块、零部件的设计及定型阶段，产品包括雨刮器、车门、电柜、车窗、弹簧底座等。

代表客户

广铁集团、中国中车、青岛四方机车车辆股份有限公司、成都/武汉/南昌/南宁铁路局、广州/杭州/武汉/苏州/无锡/天津/西安地铁等。

Railway Test System

Characteristics

Comprehensive analyzing the railway product structure, installation position, condition of use and customer demand and combining with the Finite Element Analysis method, to provide the customer with reasonable and effective test scheme, failure analysis and improvement scheme and guarantee the product quality.

Ability

According to the characteristics and practical usage of different railway product, combined with the Finite Element Analysis, targeted provide the customer with reasonable and effective test scheme.

Testing the failure product by material composition analysis, metallographic structure analysis, material force analysis, the types of fracture surface analysis, hardness analysis, etc, to find the corresponding failure reason and provide the corresponding improvement scheme.

Test item: low temperature, damp and hot, high temperature, overvoltage, salt spray, vibration, shock, stress screening, insulation, appearance inspection, etc.

Test equipment: high and low temperature test chamber, high temperature chamber, DC power supply, AC power supply, salt spray test chamber, electromagnetic vibration table, shock tester, insulation apparatus, metallographic microscope, etc.

Meet the domestic and foreign standards, such as GB/T21653-2008, GB/T25119-2010, TB/T 3058-2002, TB/T3051.1-2009, IEC61373-2010, BSEN61373, BSEN50155:2007, IEC60571:2006, etc.

Typical Application

Suitable for the design and pattern phase of rolling stock products, such as modules, components, parts etc. Typical application products have wipers, doors, electric cabinets, windows, spring base, etc.

Representative Customers

GGuangzhou railway group, China's car, Qingdao sifang locomotive vehicle co., LTD., Chengdu/Wuhan/Nanchang/Nanning railway bureau, Guangzhou/ Hangzhou/ Wuhan/ Suzhou/ Wuxi/ Tianjin/ Xi'an metro, etc.



3 我们的研究所

广电计量环境可靠性工程研究所，专业从事环境与可靠性试验标准化研究、可靠性分析、可靠性设计整改、可靠性试验、失效分析等相关领域的研究。研究所拥有强大的科研团队，拥有多名技术专家和学科带头人，其中拥有博士6人，研究员3名，高级工程师6名、硕士研究生近80名。

研究所主要的研究方向包括

一室：标准化研究室

基本技术方向：

负责跟踪环境与可靠性试验相关领域国际标准化研究的进展状况，开展国际标准化研究相关工作；负责组织开展公司内部环境与可靠性试验标准化研究工作，并形成企业标准规范；负责申报国家标准、国军标、行业标准等相关标准研究项目；组织开展相关技术人员的标准化培训工作。

二室：先行技术开发室

基本技术方向：

负责跟踪国家重大专项，如大飞机专项、航母专项、轨道交通专项等重大专项，开发储备相关的环境与可靠性技术；负责航空机载、船级社、轨道交通、雷达等大型产品的可靠性分析、建模、试验与评估、整改技术研究；负责科技部国家工程中心、发改委国家工程中心、国家及省部级重点实验室等相关编写工作。

三室：技术应用研究室

基本技术方向：

组织开展环境与可靠性实验室（以下简称实验室）装置研发、平台及系统开发研究工作；组织开展专利申报及应用工作；配合公司战略发展部开展远程测控及客户交互系统开发的技术支持与应用工作；研究开发实验室急需的缺项试验技术；负责开展实验室扩项认证相关技术支撑工作。

目前研究所已完成科研项目20余项，涉及的行业包括汽车、舰载设备、电工电子、柴油发动机、雷达、航空机载设备等领域，申请专利100余项、发表论文200余篇，编写国家标准100余项。

部分科研项目列表

全封闭高原柴油发动机四综合环境（耐候箱）方法及系统

舰船用电连接器失效分析与可靠性研究

汽车内饰门护板综合测试台研发

程式式高气压试验系统研发

汽车发动机线束疲劳测试装置研发

通指车辆道路载荷谱标准方法研究

便携式整车车厢气密性智能检测装置

汽车安全带高度调节器耐久测试系统

汽车零部件开闭耐久测试平台

产品温度自动监测控制装置

DO-160标准实施指南研究

专利



Our Institute

GRGTEST environmental and reliability Engineering Research Institute specializes in the standardization research of environment and reliability test, reliability analysis, reliability design rectification, reliability test, failure analysis and other related fields. Our institute has a strong scientific research team with several technical experts and academic leaders, including 6 doctors, 3 researchers, 6 senior engineers and more than 80 graduates.

The main research interests of our institute include:

The first studio: Standardization research laboratory

Basic technical direction:

Responsible for tracking the progress of international standardization research in the field of environment and reliability test, launching the research of international standardization; Responsible for the company's internal standardization research of environment and reliability test, and constructing the corporate standards and conventions; Responsible for declaring research projects of national standards, military standard, industrial standards, etc.; organize the standardization training of related technical personnel.

The second studio: advanced technology development laboratory

Basic technical direction:

Responsible for tracking national major projects, such as large aircraft、aircraft carrier、rail transportation projects, etc., developing and reserving related environmental and reliability techniques; Responsible for the reliability analysis, modeling, testing and evaluation, rectification technique research of Airborne, classification societies, rail transportation, radar and other large products; Responsible for engineering center of national Science and Technology ministry, engineering center of national development and reform commission, national and provincial key laboratories.

The third studio: technology application laboratory

Basic technical direction:

Organizing and launching the equipment research and development, platform and system development of the Environmental and Reliability Laboratory (hereinafter referred to as laboratory); Organizing the patent declaration and application; Carrying out technical support and application of remote monitoring control and customer interaction system development with the company's strategic development department; Developing test techniques lack of items urgently needed by laboratories; Responsible for carrying out related technical support of the laboratory's expansion certifications.

Currently the institute has completed more than 20 research projects, involved industries including the fields of automotive, shipborne equipment, electrical and electronic, diesel engine, radar, airborne equipment, etc., declared more than 100 patents, published more than 200 papers and written more than 100 national standards.

List of Partial research projects:

Four composite environment (weather resistance chamber) method and system of totally enclosed plateau diesel engine.

Failure analysis and reliability research of electrical connector used on ship.

Research and development of automotive interior door fender integrated test platform.

Programmable high pressure test system development.

Research and development of fatigue testing device exerted on automotive engine wire harness.

Research of standard method of vehicle road load spectrum.

Intelligent tightness-detection device of portable vehicle compartment

Height adjuster durability testing system of car seat belt

Auto Parts open and close durability test platform

Product temperature automatic monitoring and control device

Research of implementation guide for the standard of DO-160

4 我们的客户

环境与可靠性检测中心经过数十年的努力与建设，在航空航天、电子电器、船舶、汽车、通信等行业有突出优势及重大影响，客户遍及全球，包括：

- 万江机电、太原航空仪表、常州赛尔、沈阳飞机工业集团、中国商用飞机有限责任公司、西安飞机工业集团、新乡航空、185厂、喜乐航、深圳智讯云端等；
- 索尼、ThinkPad、联想、三星、卡西欧、奥林巴斯、佳能、Ericsson、七喜电脑、华硕、松下电器、西门子电器、TCL、LG、飞利浦、海尔、美的、奥克斯、创维、格力、伊莱克斯等；
- 713所、750厂、550厂、中电科20所、中船重工707、千山航空、海兰信、航新航空、山西科泰威、哈尔滨工程大学等；
- 法雷奥、航盛电子、好帮手、同致电子、大众、戴姆勒、沃尔沃、广汽、东风日产、中国一汽、长城汽车、江淮汽车、北京汽车、比亚迪、吉利、长安汽车、海马汽车、五菱、奇瑞等；
- 6907厂、3303厂、568厂、9603厂、710厂、834厂、722所、38所、武汉客车厂、东风越野车等；
- 中电54所、中电34所、中电30所、中电7所、716厂、714厂、国营712厂、大唐、中科院等。

Our Customers

GERTC has outstanding advantages and significant impact on the industries of aerospace, electronics, shipbuilding, automotive and telecommunication through decades of effort and construction. Our customers are throughout the world, including:

WanJiang electromechanical, Taiyuan Aviation Instrument, Changzhou Purcell, Shenyang Aircraft Industry Group, China Commercial Aircraft Co., Ltd., Xi'an Aircraft Industrial Corporation, Xinxiang Aviation, 185 factory, Shareco, Shenzhen Intelligence Cloud, etc.;

Sony, ThinkPad, Lenovo, Samsung, Casio, Olympus, Canon, Ericsson, Hedy Computer, Asus, Panasonic, Siemens appliances, TCL, LG, Philips, Haier, Midea, Oaks, Skyworth, Gree, Electrolux, etc.;

713 institute, 750 factory, 550 factory, the 20th research institute of CETC, CSIC 707, Qianshan aviation, Highlander, New Air Route, Shanxi kotelmems, Harbin Engineering University;

Valeo, Hang Sheng Electronics, Coagent, Tung Thih Electronic, Volkswagen, Daimler, Volvo, Guangzhou Automobile, Dongfeng Nissan, China FAW, Great Wall Motor, Jianghuai Automobile, Baic Motor, BYD, Geely, Chang'an Auto, Haima Motor, SGMW, Chery, etc.;

6907 factory, 3303 factory, 568 factory, 9603 factory, 710 factory, 834 factory, 722 factory, 38 institute, Wuhan Bus Plant, Dongfeng SUV, etc.;

the 54th research institute of CETC, the 34th research institute of CETC, the 30th research institute of CETC, the 7th research institute of CETC, 716 factory, 714 factory, state-owned 712 factory, Datang, Chinese Academy of Sciences.



4 全国服务网点

National service Network

一站式服务

- 军用设备测试体系
- 汽车电子电器类测试体系
- 包装类产品测试体系
- 涂镀层产品测试体系
- 高度测试体系
- 船级社及渔政局试验体系
- 整车车辆测量试验系统
- 轨道交通试验系统
- 元器件筛选优化
- 发动机类试验系统



■ 检测基地

■ 业务分公司