



电线电缆测试认证

Testing and Certification for Wires and Cables

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 **TÜVRheinland**[®]
Precisely Right.

本地化专业测试，加速电线电缆全球化进程

Professional testing to facilitate global market access for wires and cables

近年来随着能源、铁路、轨道交通、建筑、通信、汽车等产业的高速发展，配套的电线电缆行业迎来新一轮的机遇。对制造商来说，如何保障产品品质与安全使其符合目标市场的相关标准，乃至突出产品独一无二的特性，将显得至关重要。

德国莱茵 TÜV 大中华区在电线电缆检测认证领域拥有 30 多年的丰富经验，通晓各国电线电缆产品最新的认证标准要求，为各类传统电缆以及特种电缆产品，如光伏电缆，电动汽车电缆，机车电缆及中高压电缆等提供专业的一站式本地化服务。



The wire and cable industry now has new opportunities to expand thanks to the rapid development of the energy, railway, rail transit, construction, communication, shipping and automobile industries. To stand out from their competitors in today's increasingly competitive international marketplace, it is crucial that firms demonstrate the quality and safety of their wire and cable products by ensuring their compliance with all relevant standards in target markets.

TÜV Rheinland Greater China has over 30 years of experience in the testing and certification of wires and cables, with in-depth knowledge of the latest international certification criteria for wire and cable products. We can provide you with a professional, one-stop local service for most types of conventional cables, photovoltaic (PV) cables, electric vehicle (EV) cables, railway rolling stock cables, medium-high voltage cables and other types of cables.

德国莱茵 TÜV，您值得信赖的合作伙伴

TÜV Rheinland is your reliable partner

- 通过与多家国家级电线电缆检测中心的通力合作，我们可以为各个地区电缆企业提供本地化的测试和发证服务，有效缩短项目周期
- 我们的测试报告得到了国内和国际买家高度认可，为您开拓全球市场助力
- 我们的多国测试认证标识可以帮助您符合不同市场的法规要求
- 通过展现您的产品符合相关安全标准，帮助您降低责任风险
- 独特的 Certipedia 平台有助于全面提升您的产品在国内、国际市场的信誉度和竞争力
- TÜV 2PfG 系列标准的制定，引导和规范了新兴电线电缆行业的合理发展

- Through our in-depth cooperation with a few national level testing and inspection centers for cable and wire, we offer you a local service to reduce the testing and certification lead time
- Our test reports are widely recognised by overseas buyers, providing you with greater access to global markets
- TÜV Rheinland's internationally recognised test marks demonstrate your compliance with legal requirements
- We can help you to reduce your risk of liability by demonstrating the safety of your products
- Certipedia enhances your credibility and competence in both the global and domestic marketplaces
- TÜV 2PfG series of standards help to guide and regulate the rational development of cable and wire industry.

我们的服务 Our services

一站式 ONE-STOP SOLUTION

针对一套样品，我们可以根据 EN, IEC, GB 以及其他国家标准要求，为企业颁发符合欧洲、中国、日本、澳洲、巴西、北美、印度、俄罗斯、南非、印尼等证书，进行一站式的测试认证服务，降低企业成本，提升品牌认可度。

For one set of sample, we offer one-stop testing and certification services to enterprises that fall in conformity with EN, IEC, GB or national standards, including Europe, China, Japan, Australia, Brazil, North America, India, Russia, South Africa and Indonesia. We aim to lower corporate costs while enhancing brand awareness.

定制式 CUSTOMIZED SERVICES

可以依据客户的要求，按照国际标准、中国国家标准、行业规范、企业规范或者标准的部分章节内容进行测试，签发报告，颁发德国莱茵 TÜV 中国证书。

Customized testing according to international and Chinese standards, industrial or corporate requirements and contents in certain chapters, and a certificate with TÜV Rheinland China mark will be issued subsequently.

产品范围 Product scope

- | | | | |
|-------------|---------------------------------|--------------|---------------------------|
| · 电动汽车电缆 | EV cables | · 电动汽车车内高压电缆 | HV cables built in for EV |
| · 中高压电力电缆 | Medium- and high-voltage cables | · 机器人用电缆 | Robot cables |
| · 机车车辆用电缆 | Railway rolling stock cables | · 建筑电线电缆 | Cables for buildings |
| · 风能电缆 | Wind turbine cables | · 同轴电缆 | Coaxial cables |
| · 光伏发电系统用电缆 | Cables for the PV power system | · 光纤 | Optical fiber cables |

常用产品主要标准

Major standards for common products

- 光伏发电系统用电缆 Cables for the PV power system: 2PFG 1169/08.07, 2PFG 1940/12.11, EN 50618:2014
- 充电桩电缆 Cables for EV charging stations: EN 50620:2016, 2PFG 1908/05.12, GB/T 33594-2017
- 电动汽车车内线 Cables built in for EV: QC/T 1037-2015, ISO 6722-1:2011, ISO 14572:2011
- 机器人电缆 Robot cables: 2PFG 2577/08.16
- 机车轨道用电缆 Cables for railway tracks: EN 50264, EN 50306, EN 50382, BS 6853, EN 45545, EN 50200



中国标识，增值优势

Always a good sign. The TÜV Rheinland's China mark.

德国莱茵 TÜV 的测试标识代表了产品、服务和管理体系经过我们严格的检测，认证和检验，这些信息公开透明，可随时随地查询，全球适用。我们的标示是安全和质量的代名词。德国莱茵 TÜV 中国证书是经 CNCA 许可颁发的自愿性认证证书，可以依据中国标准、行业标准、企业标准进行检测发证，为在中国市场销售的产品提供品质保证。

This mark stands for all the information about products, services and systems that are tested, certified or inspected by TÜV Rheinland. Transparent, available anytime worldwide – powerful and unique. The TÜV Rheinland' s test mark. TÜV Rheinland' s certificates with China mark are voluntary certificates authorized by CNCA, and may be subject to issuance under Chinese national, industrial or corporate standards. As a result, the quality of the products with China mark is assured, and thus boosting sales in the Chinese market.

光伏发电系统用电缆

Cables for PV power systems

光伏电缆作为二十一世纪初需求量最大的新能源电缆，主要用于连接光伏组件和逆变器之间的电流传输。为了最大程度地优化整个光伏系统的使用寿命，光伏电缆能够适应各种严酷的使用环境和连续的满负荷工作，同时也保证电流传输的安全。

As renewable energy cables in the early 21st century, PV cables enjoy the largest consumption volume, which is mainly applied to connect PV modules and current transmission between inverters. To maximize and optimize the life span of the entire PV power system, PV cables must be able to adapt to a variety of rigorous working conditions at a constantly full working load, while ensuring safe current transmission.

相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- 2PFG 1169/08.07
- 2PFG 1940/12.11
- 2PFG 1990/05.12
- EN 50618:2014

服务

SERVICES

- 型式试验报告
Type testing report
- 德国莱茵 TÜV 标识认可证书
TÜV Rheinland test mark and certificate
- 德国莱茵 TÜV 中国标识证书
TÜV Rheinland China mark and certificate



电动汽车充电系统线缆

EV charging station cables

充电桩电缆欧洲标准 EN 50620:2016 已正式颁发，最新国家标准 GB/T 33594-2017 也即将出台，德国莱茵 TÜV 依照充电桩电缆三份主要标准（GB/T 33594-2017, 2PFG 1908, EN 50620）推出了中欧双证服务，帮助企业在中欧市场抢占先机。电动汽车车内线国际标准 ISO 6722, ISO 14572 已被广泛接受和流通，中国国内首份新能源汽车高压线标准 QC/T1037-2016 已正式颁布，德国莱茵 TÜV 有能力依据相关标准 QC/T 1037, ISO 6722, ISO 14572 为电动汽车车内高压线进行全球认证，为企业提供增值服务。

The EV cable's European standard (EN 50620:2016) has been published officially, and the GB standard will be released soon. To better serve our clients, we offer a Sino-European certificate based on the three major standards (GB/T 33594-2017, 2PFG 1908 and EN 50620).

The international standard for cables built in for EV (ISO 6722, ISO 14572) has been widely accepted. The Chinese first standard for HV cables built in for EV (QC/T1037-2016) has been released as well. TÜV Rheinland is capable to certify the cables according to QC/T 1037, ISO 6722 and ISO 14572, supporting enterprise to get worldwide approvals.



相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- EN 50620:2016
- 2PFG 1908/05.12
- GB/T 33594-2017
- QC/T 1037-2015
- ISO 6722-1:2011
- ISO 14572:2011

机器人用电缆

Robot cables

机器人电缆作为二十一世纪初期诞生的新型产品，被广泛应用于拖链、机械手臂、机器人生产线等产品。三轴及以上机器人手臂本体上，随机器人手臂不断运动，为机器手提供动力及传递信号的电缆，需具有优异的耐弯曲、耐扭转、耐油污及耐磨损等性能。

As a new product in the early 21st century, robot cables are widely applied to production lines involving cable carriers, robotic arms and robots. As robotic arms are constantly in motion, three-axis (or more) articulated robots will provide momentum and transmission signals, which require cables to demonstrate such outstanding resistance features as bending resistance, twist resistance, oil resistance, friction resistance, and others.

相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- 2PFG 2577

服务

SERVICES

- 型式试验报告
Type testing report
- 德国莱茵 TÜV 标识认可证书
TÜV Rheinland test mark and certificate



轨道交通车辆电缆

Railway rolling stock cables

进入 21 世纪以来，中国高速铁路发展极为迅速，同时带动了轨道交通车辆电缆（俗称机车电缆）的快速发展。

In the 21st century, China witnesses rapid development in the high-speed railway system, while driving fast development in rail transportation cables (commonly known as "railway rolling stock cables").



相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- EN 50264
- EN 50306
- EN 50382

其他防火、阻燃及毒素要求

OTHER REQUIREMENTS, INCLUDING FIREPROOFING, FLAME RETARDATION, AND TOXINS

- BS 6853
- DIN 5510-2
- NFF 16101
- EN 45545-2
- EN 50200

服务

SERVICES

- 型式试验报告及 AK 证书
Type testing report and AK certificate
- 耐火及毒素测试报告
Fire retardation and toxin testing report

高中低压电力电缆

High-, medium- and low-voltage cables

发电厂、变电站及工矿企业都大量使用电力电缆，一旦电缆起火爆炸，将会引起严重火灾和停电事故，此外，电缆燃烧时产生大量浓烟和毒气，不仅污染环境，而且危及人的生命安全。为此，应注意电力电缆的安全性以及防火阻燃性能。

Power plants, transformer substations, and mining companies require a multitude of power cables. When on fire and even in the event of an explosion, cables will lead to a severe fire and power shortage. The burning of cables will generate massive smoke and toxic gas, which not only pollute the environment but also endanger our safety. Therefore, the safe, fireproofing, and flame-retardant performance of power cables draw great attention from these enterprises.



相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- IEC 60502
- IEC 60840
- IEC 62067
- HD 603 S1-1994 +A3-2007
- HD 604 S1-1994 +A3-2005
- HD 620 S2-2010
- HD 622 S1-1996+A2-2005
- HD 626 S1-1996 +A1-1997+A2-2002
- HD 629.1 S2-2006 +A1-2008
- HD 629.2 S2-2006 +A1-2008
- HD 632 S1-1998 +A1-2002
- AS/NZS 5000.1
- AS/NZS 1429.1

服务

SERVICES

- TÜV/CE/CB/ 日本 PSE/ 巴西 INMETRO/ 南非 SABS
TÜV/CE/CB/PSE/INMETRO/SABS
- STL 型式试验报告
STL type testing report
- 耐火电缆 TÜV MEEI 证书及测试报告
TÜV MEEI fire-resistant cable certificate and testing report

中压风能电缆

Medium-voltage Cables for Wind Power Plants

自 21 世纪以来，全球风能发电的装机量已经超过 2.5 亿千瓦。30 多个国家和地区都已经拥有相当可观的风能发电机。TÜV 莱茵针对风能电缆设计了全新的扭转试验，与国际知名风电公司接轨，为海上风电项目保驾护航。

In the 21st century, the installed capacity of wind power plants worldwide has exceeded 250 million kW. Over 30 countries and regions now have considerable numbers of wind-driven electric generators. TÜV Rheinland's brand-new torsion test of cables for wind power plants is designed to meet the demands of internationally known wind-power corporations, ensuring that their off-shore wind power projects proceed smoothly.



相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- 2PfG 2630/06.17
- GB/T 33606

服务

SERVICES

- 型式试验报告及证书
Type test report and certificate
- 无卤及扭转试验测试报告
Halogen-free test report and torsion test report

建筑用电线电缆

Building Wires and Cables

2017年7月起，欧洲范围内建筑用电线电缆将必须满足建筑指令 EU 305/2011 (Construction Products Regulation: 简称 CPR 指令) 相关法律法规。EN 50575:2014+A1:2016 中规定，包括电力电缆、控制电缆、通信电缆等线缆产品都必须按照标准中相关测试后评定级别。

Since July 2017, wires and cables used in buildings in Europe must conform to the relevant laws and regulations stated in the Construction Products Regulation 305/2011/EU (CPR). According to the EN 50575:2014+A1:2016, power cables, control cables, communication cables and other wires and cables must be graded based on the related test results stated in the standard.



相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- EN 50575:2014+A1:2016
- EN 60332-1-2
- EN 50399

服务

SERVICES

- 型式试验报告
Type test report
- CE 证书
CE certification
- 防火测试预评级服务
Preliminary fire-resistance rating

光纤光缆及跳线

Optical Fibre Cables and Jump Wires

近年来随着通讯网络产业的高速发展，国际买家对光纤产品的需求日益增加，配套的光纤光缆行业迎来新的机遇；同时国际市场对产品质量也有严格的监管要求，对制造商来说，如何保障产品品质与安全使其符合目标市场的相关标准，将显得至关重要。德国莱茵 TÜV 是国际领先的检测与认证机构，可为产品质量检测提供有力的保障。

With the rapid development of the communication network industry, demands from international buyers for optical fibre products are increasing, thereby providing new opportunities for the optical fibre cable industry. International regulations apply strict standards for product quality, which is of vital importance for manufacturers to gear their products to the relevant quality and security standards of their target markets. As a leading and internationally recognised testing and certification institute, TÜV Rheinland can provide powerful guarantees on its product quality tests.



相关标准及要求

RELEVANT STANDARDS AND REQUIREMENTS

- GR-326-CORE
- IEC 60793
- IEC 60332
- IEC 61753
- IEC 60794
- IEC 61034
- IEC 60331

服务

SERVICES

- 型式试验报告及证书
Type test report and certificate
- 传输、光学性能等部分性能测试服务
Performance tests concerning transmission and optical property, etc.

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