

充电桩电缆
EV charging cables

充电桩电缆被视为未来新能源电缆的发展趋势，成为电缆企业转型升级的重要产品。全球第一份电动汽车充电桩电缆标准 2 Pfg 1908/05.12是由德国莱茵TÜV起草，该标准规范和促进了整个电动汽车电缆行业的发展。德国莱茵TÜV致力于为新能源电缆提供一站式测试及认证服务，全面引领中欧电动汽车充电桩标准技术潮流，为电缆企业转入欧标和国标提供全方位服务。

充电桩电缆欧洲标准已正式颁布，而新国标也即将出台，德国莱茵TÜV依照三份主要标准（GB/T 33594-2017，2Pfg1908，EN 50620）推出了中欧双证服务，为充电桩电缆制造商提供更加便捷、高效、优质的服务，帮助企业在中欧市场抢占先机。

EV charging cables are the future trend for renewable energy cables, and thus have become the most important products for cable manufacturers. The first ever EV charging station standard 2 Pfg1908/05.12 was drafted by TÜV Rheinland. It regulates and promotes the development of the entire EV cable industry. We are devoted to providing one-stop testing and certification services for renewable energy cables, leading the study and advancement of EV charging cable technology and offering cable manufacturers the comprehensive solutions they need to access the European and Chinese markets.

The EV cable's European standard 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). Our efficient, high-quality services help you break into the Chinese and European markets.



欧洲 Europe EN 50620:2016	中国 China GB/T 33594-2017 2Pfg 1908/05.12
其他地区 Other regions 2Pfg 1908/05.12	

认证标识 Certification marks



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Electric vehicle charging system testing and certification service

面对日益严峻的能源、环境、气候变化，发展新能源动力汽车已经逐步成为全球共识。电动汽车作为解决方案之一，其普及将对新能源应用以及交通系统产生积极而又深远的影响，也将为电动汽车相关充电系统产品行业带来良好的发展机遇。

针对全球电动汽车产业链参与企业，我们在充电设备领域提供全方位的本地化服务，包括战略咨询、产品研发、产品检测和认证，以及为整车厂及充电运营服务商提供充电桩安装人员培训、运营商资质审核、现场安装审核等服务。

Widespread global concerns over such environmental issues as resource shortages, pollution and climate change are boosting demand for new energy vehicles. Electric vehicle, as a solution for modern transportation, has been the trend for global automobile industry. As they grow in popularity, these vehicles will have a profound positive impact on new energy applications, transport and society at large. Such popularity will also create tremendous opportunities for charging systems and the products of other electric vehicle-related industries.

We provide local services to EV charging facilities for the global EV industry chain. Our services cover strategy consulting, R&D, charging station testing and certification. Additionally, we provide technical services in the charging station installation fields. We cultivate installation professionals for vehicle manufacturers and charging service companies, in addition to issuing qualification certification for charging service companies and providing on-site inspection services.

德国莱茵TÜV，您值得信赖的合作伙伴

TÜV Rheinland is your reliable partner

- 我们通过与国内权威实验室的合作，可以依照中国产品标准为电动汽车充电系统产品颁发德国莱茵TÜV中国证书
- 我们是全球首家IEC 62752: 2016-电动车辆用线控和保护设备模式2充电器标准的CBTL实验室
- 我们是亚太区首家获得CBTL资格认证的电动汽车充电桩实验室
- 我们是大中华区唯一一家有能力为电动汽车全产业链提供服务的认证公司
- 我们可以为客户提供欧洲、美洲、日本和中国四个国家和地区的测试、认证服务

- Through close cooperation with domestic lab with high reputation, we are able to issue TÜV Rheinland China mark for the EV charging systems according to Chinese standard
- We are the world's first CBTL according to IEC 62752:2016 - In-cable control and protection device for mode 2 charging of electric road vehicles (IC-CPD)
- We are the first electric vehicle charging station CB laboratory in Asian-Pacific region
- We are the only certification body in Greater China that can provide services to the entire electric vehicle industry chain
- We offer testing and certification services according to European, American, Japanese and Chinese standards and regulations



测试项目

Testing items

- 充电站和车载充电器
 - 充电站功率计费装置测试
 - 充电站和汽车通讯测试
 - 充电站充电模式验证
 - 充电站软件功能安全验证
 - 充电站过充电测试
 - 充电站人员保护系统测试
 - 环境试验
 - 非正常测试
- 充电连接器
 - 汽车碾过测试
 - 寿命测试
 - 紫外线暴露测试
 - 二氧化硫、二氧化碳和空气混合气体测试
 - 硫化氢混合气体测试
 - 耐电弧测试
 - 短路耐受测试
- 充电电缆
 - 电性能测试
 - 机械性能测试
 - 低温测试
 - 流体兼容性测试
 - 抗外载压力
 - 整线伸展、耐弯曲
 - 环境试验
 - 燃烧性能
- Charging stations and car chargers
 - Electricity metering testing
 - Data communication testing
 - Charging mode verification
 - Software functional safety verification
 - Overcharge testing
 - Personnel Protection System testing
 - Environmental testing
 - Testing for abnormalities
- EV charging connectors
 - Vehicle drive-over testing
 - Service life testing
 - Ultraviolet light exposure testing
 - Mixture of carbon dioxide, sulphur dioxide and air
 - Mixture of hydrogen sulfide and air
 - Resistance to arcing testing
 - Conditional short-circuit current withstanding testing
- Charging cables
 - Electrical testing
 - Mechanical properties
 - Testing at low temperature
 - Fluid compatibility
 - Vehicle drive-over
 - Testing for extensible leads and flexibility
 - Environmental testing
 - Testing under fire conditions

测试范围

Testing scope

- 电动汽车充电站
- 电动汽车充电电缆
- 电动汽车充电连接器
- 电动汽车车载充电器
- 电动汽车车内高压线
- 电动汽车高压线束
- EV charging stations
- EV cables
- EV charging connectors
- EV on-board battery chargers
- HV cables for EV
- HV electrical wiring harnesses for EV

电动汽车充电桩

EV charging stations

安全、高效充电始终是发展电动汽车的主题，充电桩作为电动汽车主要的充电设备，其设计安全、使用安全、维护安全一直备受各级政府、行业及消费者关注，针对这些难题，德国莱茵TÜV可以为您提供检测、认证、咨询、培训等全套服务，为您解忧。

Safety and high efficiency are the main topics for EV charging. As the important charging facility, the EV charging stations have been concerned by governments, the industry players and consumers in terms of their design safety, the usage safety and maintenance issues. TÜV Rheinland is able to address your concerns by providing professional testing, certification, consulting and trainings.

作为全球汽车检测与认证行业的领导者，我们同样注重同本土权威实验室加强合作。国网电力科学研究院试验验证中心（PAL）和德国莱茵TÜV承接了本土企业绝大多数充电桩检测和认证业务，双方在实验室建设和实验能力的拓展上展开了战略合作，尤其针对中国市场特别开发了“一种测试，两种证书”的增值服务，通过试验的充电桩企业可以同时获得国网电科院实验验证中心颁发的产品证书以及德国莱茵TÜV颁发的China Mark证书，有助于企业迅速在市场上获得认可。

As the testing and certification leader in EV fields, we have been strengthening our cooperation with domestic authoritative laboratories. PAL and TÜV Rheinland handle most of the EV testing and certification business in China, and we have begun strategically cooperating with laboratory development and testing competence. Particularly, we have developed the value-added service as “one test, two certificates” for the China market. Once the testing has been passed, charging station manufacturers can be certified by PAL and TÜV Rheinland simultaneously, offering charging station manufacturers the chance for rapid market acceptance.

电动汽车充电连接器

EV charging connectors

电动汽车充电连接器作为连接电动汽车与充电桩的重要器件，其安全性和性能直接影响到充电安全，以及电动汽车的驾驶体验。我们可根据国内外法规标准对连接器进行合规性测试与认证。

EV charging connectors are the most important components in the charging stations. Their reliability and quality directly affect the charging safety and even driving experiences of e-car owners. To ensure the product's safety and quality, we perform compliance testing and certification according to domestic and international standards.



欧洲 Europe

EN 62196-1
EN 62196-2
EN 62196-3

北美 North America

SAE J 1772
SAE J 1742
UL 2251

中国 China

GB/T 20234.1:2015
GB/T 20234.2:2015
GB/T 20234.3:2015

国际 International

IEC 62196-1
IEC 62196-2
IEC 62196-3