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光伏产品检测与认证 Testing and Certification for Photovoltaic Products

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本地化一站式专业测试， 提速光伏产品出口

One-stop service to facilitate exports of photovoltaic products

随着能源短缺、环境污染以及全球气候变暖等问题日益突出，许多国家开始关注并寻求可再生能源太阳能的开发利用，旨在推动战略性可持续的经济发展。近年来，欧洲各国、美国以及亚洲市场对光伏产品需求呈现不断增长的趋势，这为光伏行业带来了良好的发展机遇；然而，国际市场对光伏产品品质要求的不断提高也同时带来了更加激烈的竞争环境以及更加严格的准入门槛。

德国莱茵TÜV是全球领先的光伏组件和零部件测试服务的提供者，已成功获得ISO 17025实验室认可，以及国际电工委员会IECEE授权的CBTL资质，为全球光伏产业提供产品安全和服务质量。我们在该领域拥有超过30年丰富经验，250多名专家，以及位于中国大陆、台湾、德国、美国、日本和印度的尖端全球光伏实验室网络，致力于提供专业的本地化一站式服务，帮助您理解国际安全标准，保障出口光伏产品的品质，从而便捷地获得全球市场的通行证。

With energy shortages, environmental pollution and global warming of increasing concern today, many countries are paying greater attention to the development of renewable energies, such as solar energy, in their strategic drive towards a sustainable economy. In the past few years, there has been ongoing growth in the demand for photovoltaic (PV) products in European, North American and Asian markets, growth that translates to huge opportunities for the PV industry. At the same time, however, the quality standards demanded by the international marketplace have become increasingly stringent, leading to fierce competition and a narrower threshold for global market access.

TÜV Rheinland is a global leader in the provision of testing and certification services for PV modules and components. Thanks to the rich experience we have accumulated over 30 years, we now serve part of the PV industry in the world, helping them to ensure product quality and safety. ISO 17025 laboratory accredited and CBTL listed, and with a unique global network backed by more than 250 experts and six world-class PV laboratories in mainland China, Taiwan, Germany, the US, Japan and India, we are dedicated to offering you a one-stop service. We assist you in understanding and complying with stringent international safety and performance requirements, thus helping you to reach all of your target markets in a reliable, time-efficient manner and to gain greater acceptance amongst buyers, investors and banks.

德国莱茵TÜV，您值得信赖的合作伙伴

TÜV Rheinland is your reliable partner

通过德国莱茵TÜV的品牌增强产品的市场竞争力

早在30多年前光伏行业起步阶段，我们已开始为光伏组件提供检测服务，通过严谨的测试及认证保障您的产品符合严格的欧盟与国际标准的安全及性能要求，从而展示您对品质的承诺——获得中立的第三方验证，提升产品品质。

Increase the competitiveness of your PV product with the TÜV Rheinland brand

As a partner to the PV industry for over 30 years, we have been offering our comprehensive testing and certification services to ensure that your products meet the stringent safety and performance requirements of European and international standards, thus enhancing your product quality and demonstrating your commitment to quality through neutral third-party verification.



获得国家及国际能源补贴

我们已获得中国及国际许多能源机构的认可，如加州能源委员会CEC、澳大利亚清洁能源理事会CEC、英国微型发电产品认证计划委员会MCS以及中国金太阳认证等，可以根据相关的要求对您的产品进行检测和认证。此外，德国莱茵TÜV的证书在德国、欧洲乃至北美市场受到广泛认可，为您在全球获得光伏项目补贴提供有力支持。同时我们的证书也能证明您的光伏逆变器产品满足各市场的并网要求。



Take advantage of national and international subsidy programmes

Our acceptance by such national and international programmes as those under the auspices of the California Energy Commission (CEC), Australia Clean Energy Council (CEC), Microgeneration Certification Scheme (MCS) and China Golden Sun means we are qualified to test your products according to the corresponding requirements of these local authorities. In addition, the certificates issued by TÜV Rheinland are widely accepted and recognized not only in Germany and Europe but also in the North American market, thus helping you to gain coverage from subsidy programs globally. With our TÜV Rheinland certificate, we can also fulfill Grid connection requirements for PV inverter in many different countries.



降低投资风险，增加产品收益

从原材料、光伏组件、零部件到光伏电站，我们通过严格控制整个光伏价值链的安全与品质为光伏投资商、银行以及安装者提供标准化或客户化的解决方案以控制投资风险，增加收益。

Minimise investment risk and increase profits (bankability)

As we provide safety and quality control for the entire PV value chain, from raw materials, PV modules and PV components to PV power plants, we are able to offer both standard and customised solutions to PV investors, banks and installers to control the investment risk and thus increase profits.

获得德国莱茵TÜV独特的测试标识

德国莱茵TÜV的测试标识展示了光伏产品的安全性与卓越的性能，在海外买家中有绝对的权威性。该标识帮助您增强产品的竞争力，为打开国际绿色市场提供有力支持。

Obtain the unique TÜV Rheinland test mark

As a demonstration of the safety and excellence of PV products, our test mark is avidly sought after and enjoys a strong reputation among overseas buyers. This unique mark thus helps to increase the marketability of your products and opens the door to international green markets.



轻松便捷的沟通

我们的专家通晓当地的语言，在无障碍的沟通中了解您的需求，帮助您及时获知最新的市场讯息与技术知识，从而从容应对市场变化。

Enjoy easy and convenient communication

As your first port of call, our experts speak the local language, understand your needs, and keep you informed of the latest market information and technical knowledge in a timely fashion, thus preparing you to enter emerging or changing markets.



获益于贯穿始终的项目全程支持

我们不仅在项目前期与项目进行中为您提供支持以确保项目能够及时有效地进行、跟踪及交付，同时帮助您了解国际标准与技术要求，优化您的内部质量控制，并以在时间及成本上都最有效的方式维护现有的认证项目。

Profit from full support throughout the project

We not only support you before and during your certification project to ensure your project is processed, tracked, and delivered in a timely and efficient manner, but we also help you to better understand international standards and technical requirements, optimise your internal quality control systems and maintain your existing certification in the most cost- and time-efficient way.



我们的服务

Our services

通过与研究机构、光伏制造商、投资商、进口商及系统安装者的紧密合作，我们始终致力于为光伏行业提供完整的解决方案，使整个光伏价值链从中获益。

With the aim to benefit the entire PV value chain, we support PV industry including PV manufacturers, investors, importers and system installers, providing them with the most comprehensive service package.

光伏价值链 PV value chain	我们的服务 Our services	测试报告 Test report	认证证书 Certificate	质量标识 Test mark
光伏零部件制造商 PV components	太阳能组件用接线盒 Junction box for PV modules	●	●	●
	太阳能系统用连接器 Connectors for PV systems	●	●	●
	太阳能组件用背板规范 Requirements for flexible front and back sheets for PV modules	●	●	●
	太阳能系统用交流连接器规范 Requirements for connectors used in PV systems with AC supply	●	●	●
	太阳能阵列互联系统规范 Requirements for PV-array interconnection systems	●	●	●
	北美市场用太阳能接线盒规范 North American requirements for PV junction boxes	●	●	●
	北美市场用太阳能连接器规范 North American requirements for PV connectors	●	●	●
光伏逆变器及 相关光伏电子 电气产品 PV inverters & PV electronics	太阳能安装系统（支架） PV mounting systems	●	●	●
	其他光伏材料测试（硅胶，焊带） Other PV material testing(silicon gel, ribbon))	●		
	电气安全测试 Electrical safety testing	●	●	●
	电磁兼容测试 EMC testing	●	●	●
	并网测试 Grid connection testing	●	●	●
	无线测试 RF/ Bluetooth/ Zigbee/ WiFi /FCC testing	●	●	●
	绿色解决方案 Green solution	●	●	●
光伏组件制造商 PV modules	功能安全评估 Functional safety	●	●	
	性能测试 Performance testing	●		
	能效测试 Energy efficiency testing	●		
	可靠性测试 Reliability testing	●		
	太阳能电池标定 Characterization of solar cells	●		
	薄膜光伏组件性能测试 Thin film PV module type approval	●	●	●
	晶体硅光伏组件与薄膜光伏组件安全测试 Crystalline and thin film PV module safety test	●	●	●
光伏电站 PV power plants	聚光光伏组件性能测试 Concentrator Photovoltaic (CPV) module type approval	●	●	●
	建筑一体化光伏组件 BIPV module	●	●	●
	电站认证 PV power plant assessment	●	●	●
	系统效率 Performance ratio	●		
	产能预测 Energy yield prediction	●		
	尽职调查 Due diligence	●		
光伏投资商及买家 PV investors and buyers	投标咨询与执行 Tender advisory and execution	●		
	出货前的检验，出货后检验 Pre-shipment inspections, post-shipment inspections	●		
	保障期结束前的检查 Check before end of guarantees	●		
	在德国莱茵TÜV实验室进行样品验证 Sample verification in our laboratory (STC, EL, thermography)	●		



展示产品质量与安全，Certipedia提升您的品牌优势

Make a difference, brand your products with Certipedia

我们不仅提供全球认可的光伏组件质量标识，同时还建立了对应的Certipedia在线证书查询平台，保障产品的真实性。每件通过德国莱茵TÜV严格的安全和品质要求并定期检验的产品将获得唯一的ID号码，让消费者或您的合作伙伴可以通过中立的第三方平台检索到相应的产品及其所通过的测试及获得的资质，如功率控制、雪压载荷测试等，从而确保其质量和安全性。通过Certipedia平台可以验证产品的来源及有效性，增强专业买家及投资商对您产品的信心，帮助您获得有力的竞争优势。

In addition to the TÜV Rheinland quality mark, the most recognised and trusted quality mark for PV modules globally, we also offer a corresponding online platform, Certipedia (www.certipedia.com), which serves as a brand protection mechanism by guaranteeing the authenticity of your products. Each product that passes the strict safety and quality requirements and periodic inspections of TÜV Rheinland is rewarded with a unique ID, thus allowing your partners and customers to search for neutral information about your PV products and readily determine their compliance with various standards and receipt of such add-on qualifications as power

controlled, heavy snow-load tested, etc. The Certipedia platform helps users to verify the origins and validity of your products, which removes the threat of counterfeit goods being sold under your brand name and reassures professional buyers and investors of the authenticity of PV products.



标准认证流程

Standard certification process





遍布全球的光伏服务网络 Global PV Network

我们在光伏领域拥有超过30年丰富经验，250多名专家，以及覆盖亚洲、欧洲和北美市场的尖端全球光伏实验室网络，分别位于中国大陆、台湾、德国、美国、日本和印度。

We have rich experience of over 30 years, more than 250 experts and 6 top-class PV laboratories located in mainland China, Taiwan, Germany, the US, Japan and India.



关于德国莱茵TÜV集团

About TÜV Rheinland Group

总部位于德国科隆的德国莱茵TÜV集团拥有140多年的经验。德国莱茵TÜV集团是国际上领先的技术服务供应商，它在全球65个国家设有500家分支机构，拥有超过17,000名员工，服务涵盖工业服务、交通服务、产品服务、生命科学、培训与咨询服务以及体系认证服务。

TÜV Rheinland Group has more than 140 years of experience and is headquartered in Cologne. TÜV Rheinland Group is a leading group for the provision of technical services worldwide. It has 500 locations in 65 countries with a workforce of over 17,000. The business scope covers Industrial Services, Mobility, Products, Life Care, Training and Consulting, Systems.



RECYCLABLE

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