



Choose certainty.
Add value.

Energy Storage System Battery 储能电池

Your challenges

Products to enter new markets must comply with various legal and technical requirements of the targeted countries. This is all the more so for Energy Storage System batteries. Understanding the wide range of directives and regulations requirements is one of the biggest challenges when bringing your product to market.

What is an ESS battery?

An Energy Storage System (ESS) battery, incorporates one or more cells, modules or battery packs which is controlled by a battery management system (BMS). These batteries are typically encased in one with terminals to connect to other products. Some ESS batteries may also have cooling and heating units within.

How can we help you?

TÜV SÜD has an extensive ESS battery testing solutions. Our experienced experts will be guide you though the entire project and ensure compliance to requirements and regulations.

您所面临的挑战

产品出口到新的市场必须符合相应国家多项法规和技术要求。对储能电池也是如此。为了将产品打入市场，您将面临着理解大量的相关指令和规则的严峻挑战。

什么是储能电池？

储能（ESS）电池通常指储能系统用的电池，由一个或多个电芯、模块和电池包和对其控制的电池管理系统（BMS）构成。通常具有外壳，通过端子或其它连接器与外部相连，可能还有冷却和加热单元。

我们能帮到您什么？

TÜV南德意志集团在储能电池的测试解决方案上具备丰富的专业知识。拥有接受过专业培训，经验丰富的工程师，将帮助您完成复杂的储能电池测试项目。



Our services for ESS battery

TÜV SÜD is a leading global expert in testing all kinds of large scale batteries, as well as ESS battery. We offer testing services to ensure that your product meets the highest level of quality and safety.

- **Life cycle testing** – Evaluate if the lifespan of your ESS battery fulfils the requirements and ensure the battery's product quality. Testing includes life cycle testing and calendar life testing.
- **Safety testing** – Simulate extreme environmental conditions and scenarios to test your ESS battery beyond its limits, such as overcharge test, impact test and external short-circuit test etc.
- **Performance testing** – Evaluate the capacitance, A.C. / D.C. internal resistance, high rate permissible current, charge retention and recovery of your ESS battery. Our experts can customize testing programmes to suit specific customer requirements such as performance testing under various climatic conditions.
- **Environmental and durability testing** – Evaluate the quality and reliability of your ESS battery, including vibration, shock, thermal cycling, rapid change of temperature, and damp heat tests.

储能电池认证一站式服务

TÜV南德意志集团具备国际领先的大电池（包含储能电池）测试专家。我们为您提供测试服务，以确保您的产品符合最高标准的质量和和安全要求。

- **循环寿命测试** —— 评价您的储能电池的使用寿命满足规格要求，为客户提供产品质量保证依据。测试项目包括循环寿命测试和日历寿命测试。
- **安全测试** —— 模拟极端环境条件和情况来评估储能电池在滥用条件下的极限，例如过充测试、撞击测试、外部短路测试等。
- **性能测试** —— 评价您的储能电池的容量、交直流内阻、高倍率电流、充电保持和恢复容量等。我们的专家可根据客户的要求为客户量身定制测试计划，比如不同气候条件下的性能测试计划。
- **环境和可靠性测试** —— 评价储能电池质量和可靠性。测试项目包括振动测试、冲击测试、温度循环测试、快速温度变化测试和湿热测试等。

Which standards apply to ESS batteries?

哪些标准适用于储能电池？

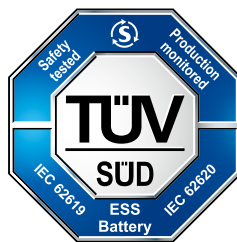
| Standards 标准 | Standard details 内容 |
|-----------------|---|
| IEC 62619 | Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications 碱性和非酸性电解液电池 —— 工业用二次锂离子电池安全要求 |
| IEC 62620 | Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for use in industrial applications 碱性或非酸性电解液二次电池 —— 工业用大容量二次锂离子电芯和电池 |
| UL 1642 | Standard for safety – Lithium batteries 锂电池安全标准 |
| UL 1973 | Standard for safety – Batteries for use in Light Electric Rail (LER) applications and stationary applications 轻型电动轨道车辆和固定式储能应用电池安全 |
| JIS 8715-1 | Secondary lithium cells and batteries for use in industrial applications – Part 1 : Tests and requirements of performance 工业用锂离子二次充电电池的性能试验（单电池及电池系统） |
| JIS 8715-2 | Secondary lithium cells and batteries for use in industrial applications – Part 2 : Tests and requirements of safety 工业用锂离子二次充电电池的安全性试验（单电池及电池系统） |

Your business benefits

- **Save time and money** – with our experts who will assist you throughout your entire testing and certification process to avoid costly and time-consuming rework.
- **Access multiple markets** – by helping you understand and identify the ever-changing requirements of regulations, so that you can achieve multiple certifications within a single project.
- **Maintain a competitive advantage** – by shortening lead times, streamlining processes and gain faster access to your key markets with the support of our experts.
- **Minimize risks** – of product non-conformance to the requirements of national and international regulatory standards.

您的商业利益

- **节省时间和金钱** —— 我们专家协助您通过完整的测试和认证流程，可以防止费时费力的重复工作。
- **获得一站式解决方案** —— 帮助您理解和确认不同规则的重叠和衍生要求，通过一个项目获得多个认证。
- **保持竞争优势** —— 通过专业项目管理缩短测试周期，优化认证流程，让您的产品迅速进入关键市场。
- **风险最小化** —— 从源头开始识别不合规之处并进行有效规避。



Why choose TÜV SÜD?

TÜV SÜD is an independent third-party technical service provider and a trusted and reliable battery testing expert. Our holistic approach and commitment to safety will optimize the reliability of ESS battery and other energy storage devices products. Through our expanding network of laboratories throughout North America, Germany, China, Korea, Japan and Singapore, we serve locally the needs of our global customers. Our global testing network provides the full range of testing services and validation planning. TÜV SÜD has a global network of experts you can rely on for international market access and in-country experience. With our interdisciplinary expertise, our team of experts will work with you along the entire product development lifecycle to add value and deliver a safe, reliable product.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specializes in testing, inspection, auditing, certification, training and knowledge services. Represented by more than 24,000 employees across 1,000 locations worldwide, TÜV SÜD holds accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to the customers, TÜV SÜD adds tangible value to businesses, consumers and the environment.

为什么选择TÜV南德意志集团?

TÜV南德意志集团是储能电池测试专家。我们对安全的整体分析和评估测试将提高储能电池和其他电气储能产品的可靠性。TÜV南德意志集团为满足客户需求将电气储能系统服务网络拓展到北美、德国、中国、韩国、日本和新加坡等地。全球的测试服务网络为全球客户提供全面的本地化测试服务和验证计划。我们作为中立的第三方技术服务机构，致力于所有利益相关方的服务。TÜV南德意志集团有遍及全球的专家网络，您可以依赖他们进入国际市场和提升在国内的竞争力。我们的跨学科的专业技术将为您的产品发展增值。

权威认证，创享价值

TÜV南德意志集团是一家优质、安全和可持续发展的专业测试、检验、审核、认证、培训和知识服务解决方案提供商。我们在世界各地超过1,000多个代表处，员工约24,000人，在欧洲、美洲、中东、亚洲和非洲广受赞誉。通过为客户提供客观的解决方案，公司为企业、消费者和环境增添有形价值。

* Some of the services listed are provided due to local regulations only and may not be available in other regions. Please contact us for further details.

* 上述部分服务可能由于当地法规的原因而无法在您的地区提供。欢迎您与我们联系咨询。

Our branches in Greater China:

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