

VDE DKE DIN

电子电气信息技术标准的制订

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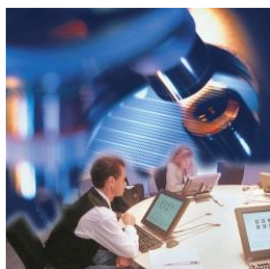


Figures and facts of the VDE



- VDE – Verband der Elektrotechnik Elektronik Informationstechnik e.V.
English: VDE – Association for Electrical, Electronic & Information Technologies
- Founded in 1893 on the initiative of Werner von Siemens and others
- 1906 one of the few founders of IEC Standardization Organization
- Headquarters in Frankfurt,
Representations in Berlin and Brussels
- Branches and representations in Europe, Asia and America
- 36.000 members – thereof 1.300 enterprises, 8.000 students
- 60.000 participants at 1.500 VDE events every year
- Support of young engineers within 60 university groups
- 1.200 employees

VDE简介



- VDE – 电气电子和信息技术协会（前身-德国电气工程师协会）
- 由Werner von Siemens先生创立于1893年，是德国著名的测试机构，直接参与德国国家标准的制定。
- 是1906年IEC标准化组织少有的几个创立人之一
- 总部位于法兰克福，在柏林和布鲁塞尔设有代表处
- 在欧洲，北非，亚洲和美洲均有分支，并设有办事处
- 36,000名会员-其中包括1,300个公司成员，8,000名学生
- VDE每年约有1,500场活动，参加人数高达60,000人
- 来自60所大学的年轻工程师的支持
- 1,200名雇员

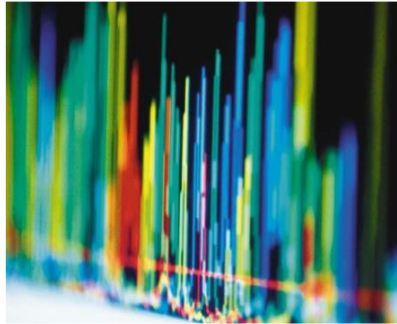
Our mission 那些年，我们吹的牛逼

- As the **leading neutral** E + I technology platform in Germany, the VDE **networks** science, business and politics
 - in order to promote the interdisciplinary development and **innovative application** of **trend-setting technologies** in electrical engineering, electronics and information technology
 - To this end, the VDE supports **knowledge exchange, education, standardization, testing** and **certification** at the highest level
 - to ensure that knowledge leads to **efficient, effective and safe applications** that **secure high living standards and the quality of life**
- 作为德国领先的E + I技术中心平台，VDE涵盖科学，商业，政治等各个领域。
 - 以促进电气工程，电子信息技术的跨领域发展为宗旨，推进创新型应用的技术发展。
 - 此外，VDE提供优质的技术交流，教育培训，标准制定，以及专业的测试与认证服务。
 - 保证电子电气设备使用的安全和高效，保障高质量的生活。

Our mission 那些年，我们吹的牛逼

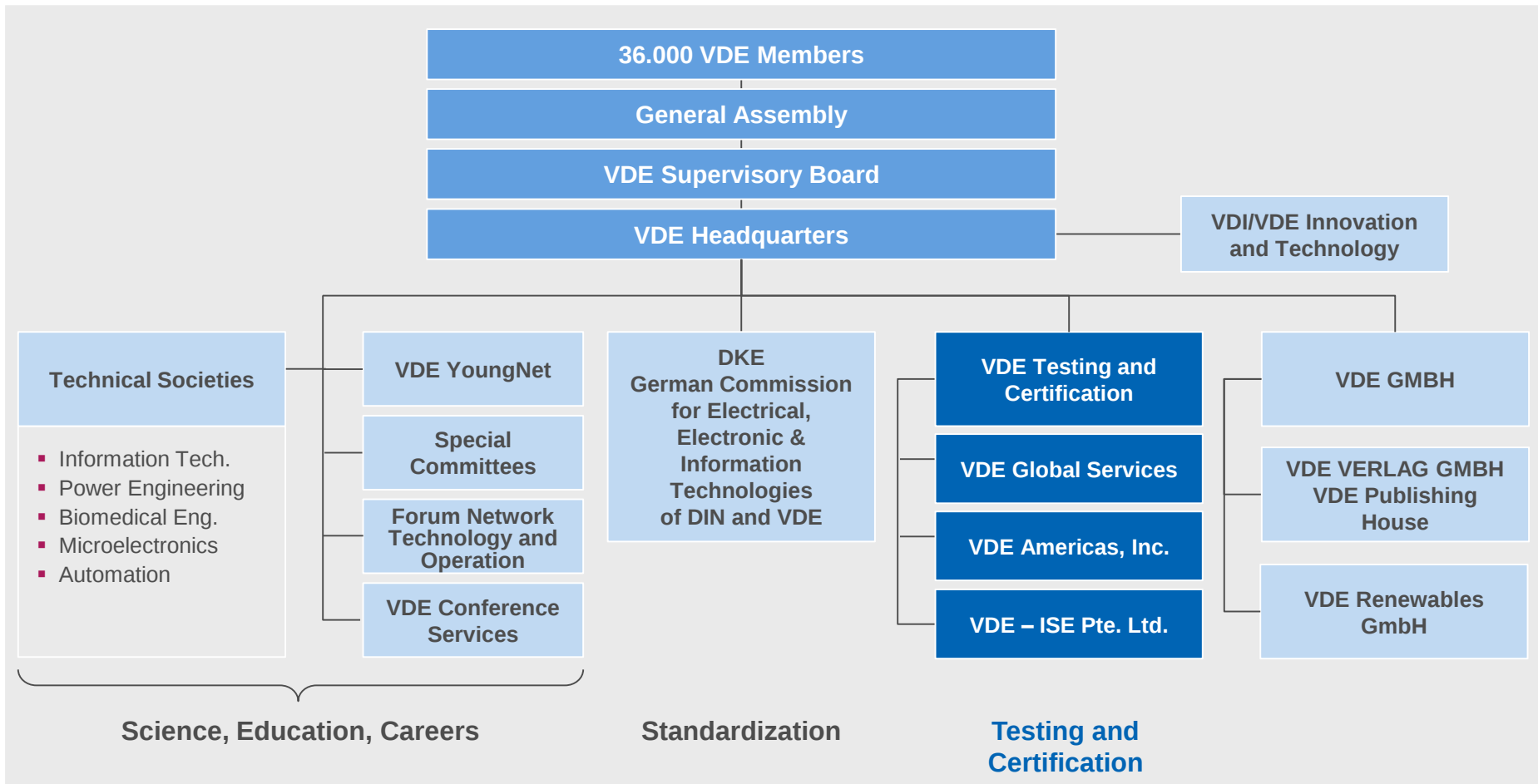


What we offer 我们可以提供什么

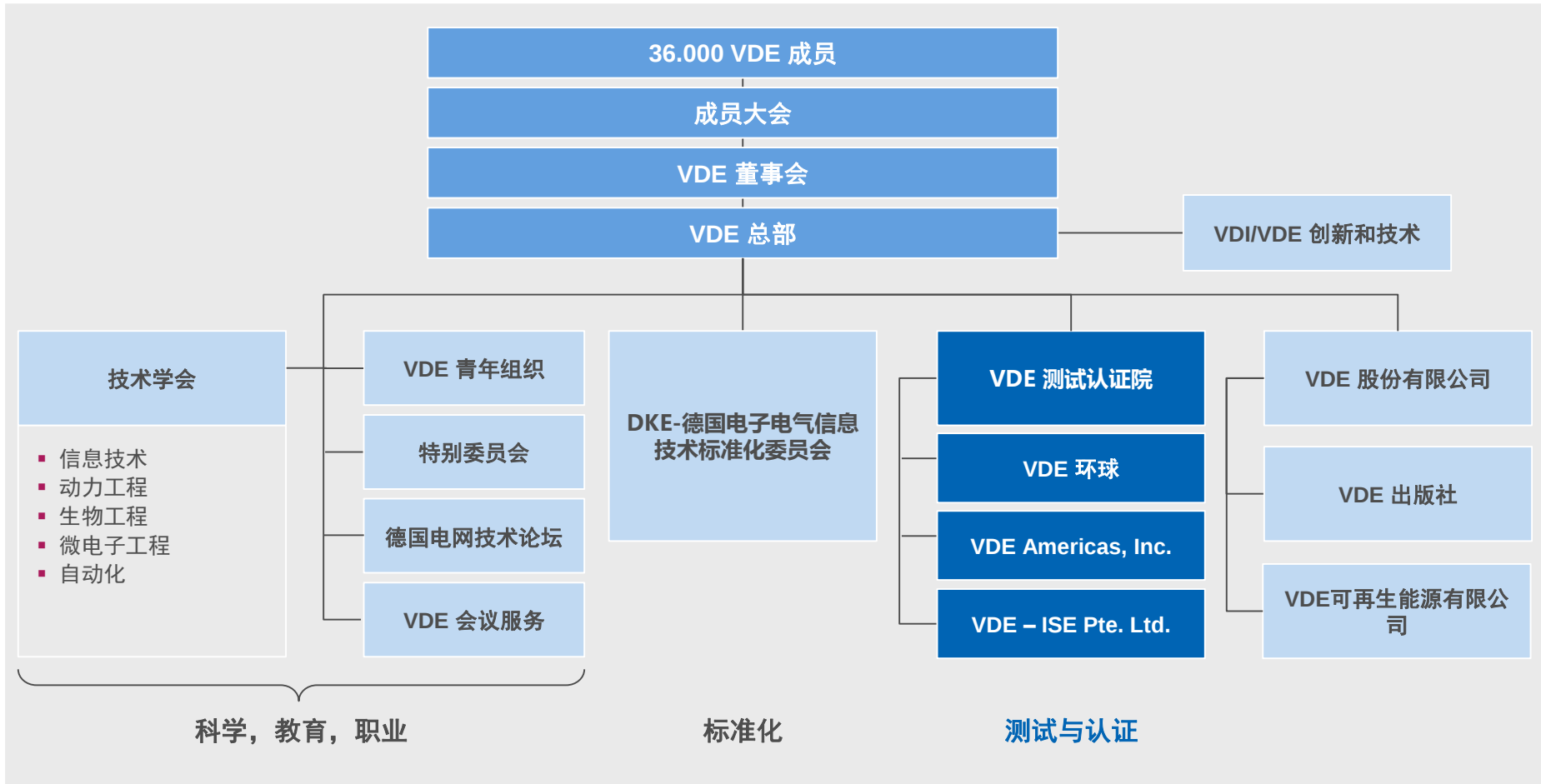


- **Knowledge transfers in a network of experts/ Technology and education policies/ Support for young talent**
专家间的知识交流/技术和培训政策/年轻工程师的支持
 - Conferences and symposia 会议和研讨会
 - Studies, analyses and position papers 研究论文, 分析和定位报告
- **International norms and standards 国际化的规范和标准**
 - Standardization work for more safety and innovation
安全与创新的标准规范
 - Representation of interests of Germany in international (IEC) and European standardization committees (CENELEC)
国际电工委员会和欧洲电工标准化委员会
- **Product testing and certification 产品的测试和认证**
 - Safety, quality and environmental protection for electrical and electronic devices, systems and components
电子电气设备、系统、零部件的质量安全及环境保护
 - VDE Marks and conformity attestations VDE标志的合格证明

VDE – The information platform for electro technology



VDE — 电子科技技术信息平台



VDE – Your partner for safety and quality and your passport to the global market

(VDE-您的产品安全和质量伙伴，是您迈向全球市场的通行证)

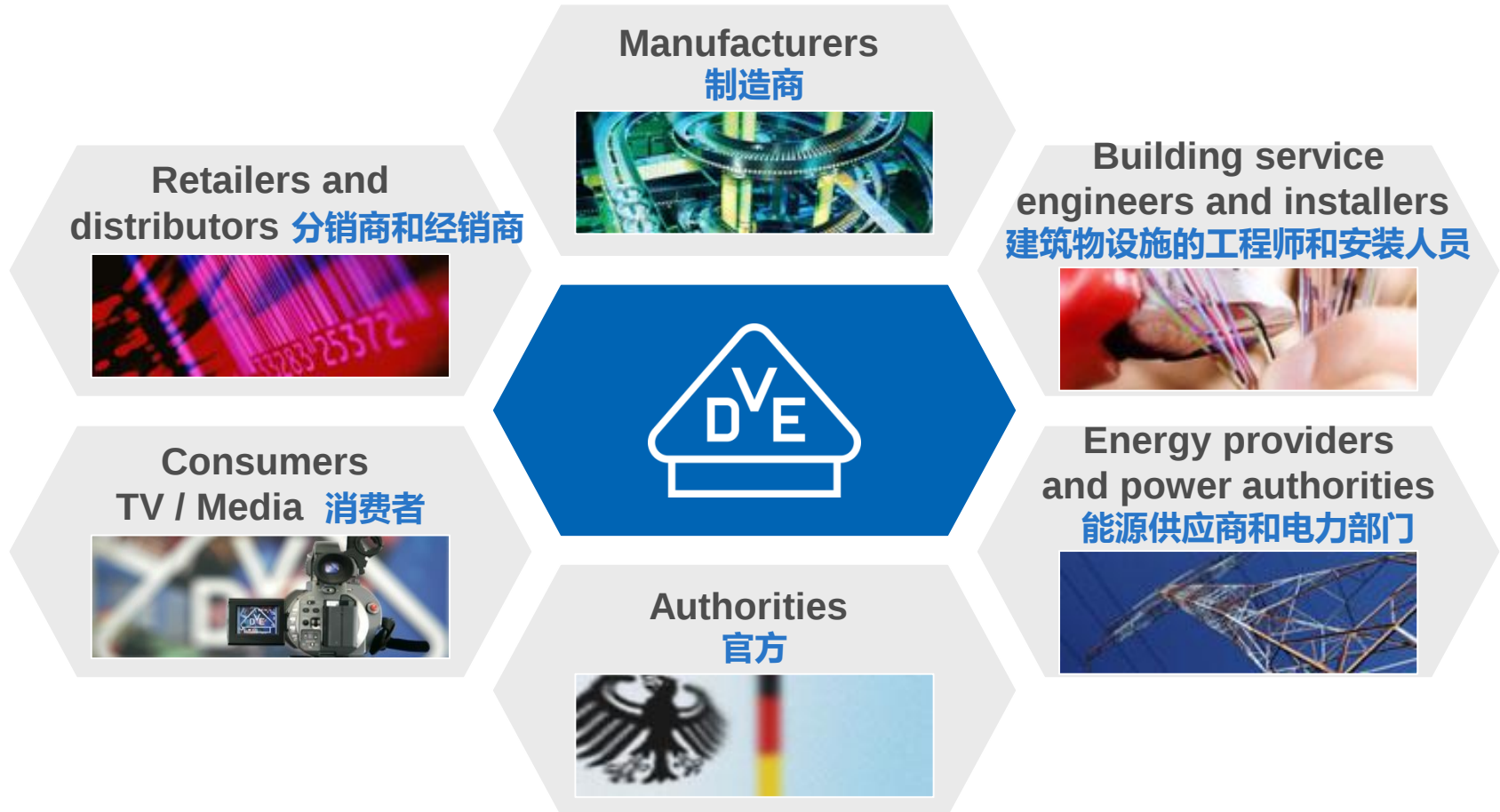


- Since 1920 the specialist for testing and certification of electrical and electronic components, appliances and systems
自1920年始，VDE成为电气电子零部件、家电和系统的测试与认证专家
- Comprehensive service portfolio for manufacturers and retailers
为制造商和零售商提供全面性的支持与服务
- Neutral and independent testing VDE的测试是中立和客观的
- Reliable and reproducible test results测试结果值得信赖，并具有可再生性
- VDE certification marks and VDE test reports enjoy high recognition on international level
VDE测试报告及VDE标志在国际水平上具有极高的认可度

VDE is the premium brand in the entire field of electro technology



Service network of the VDE Institute VDE研究院的服务网络



VDE's network with Authorities and Committees

- Chair of IECEE – International system for mutual recognition of test results on the basis of IEC standards
- Chair of IECEE Committee for Factory Surveillance (IECEE-CFS)
- Member of Executive Committee of the European Certification Schemes for electrical products (ECS)
- Chair of HAR certification scheme for cables and cords
- Chair of the CIG Operational Staff Meeting for Factory Inspection Procedures (OSM/FIP)
- Chair of the sector committee "Low Voltage Directive" EK 1 of the Central Authority of the Federal States for Safety (ZLS)
- Member of the German Committee for Product Safety of the Federal Institute for occupational Safety and Health
- Cooperation agreement with European customs authorities to combat counterfeiting and misuse of VDE certification marks
- Cooperation with market authorities for all legal requirements including safety, EMC, chemical safety and sustainability, eco-design

VDE与授权机构及委员会的关系

- 国际电工委员会主席—基于IEC 标准的测试结果国际互认制度
- 国际电工委员会电工产品合格测试与认证组织-工厂监督委员会 (IECEE-CFS) 主席
- 欧洲电子产品认证体制执行委员会 (ESC) 成员
- 欧洲电线电缆协调标准(HAR)认证体系主席
- 工厂检查流程CIG执行大会主席职位(OSM/FIP)
- 德国联邦安全技术认证中心(ZLS)低压指令技术委员会(EK1)主席
- 技术设备委员会和消费产品联邦职业安全与健康研究所成员
- 欧洲海关授权打击假冒伪劣及非法使用VDE认证标志行为的合作协议
- 与市场主导者对所有法律规范的合作, 包括安全, EMC, 化学安全及可持续性, 生态设计



The activities of the VDE – information platform for electro technology

VDE – Verband der Elektrotechnik Elektronik Informationstechnik e.V.
VDE – Association for Electrical, Electronic & Information Technologies

**Science¹⁾
Education
Profession**

Annually
60.000
seminar
participants

Standardization

5.000
honorary
experts

**Testing
Certification**

7.000
customers

Publishing

Standards,
special literature

1) 5 Technical Societies:

Information Technology; Power Engineering; Biomedical Engineering; Microelectronics and Micro Engineering; Measurement and Automation Control

VDE的活动 – 电子技术信息平台

VDE – 电气电子信息技术协会

科学¹⁾
教育
专业

每年
60.000个
研讨会参与者

标准化

5.000个
名誉专家

检测认证

7.000个客户

出版发行

标准,
特殊文献

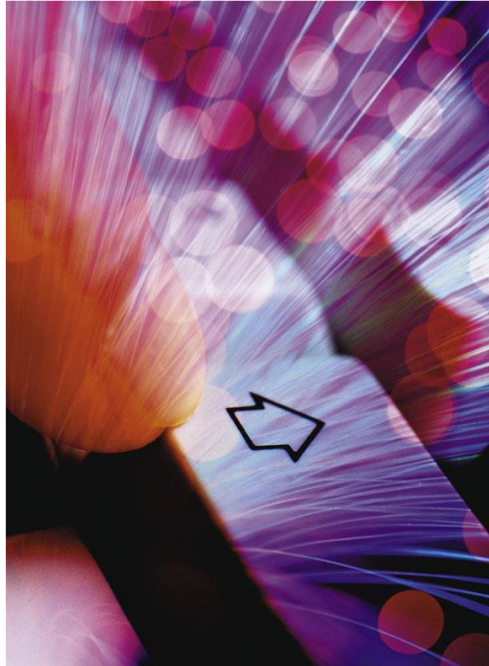
1) 5个技术协会:
信息技术; 能源工程; 生物医学工程; 微电子学和微工程; 测量和自动控制



VDE

VDE Association
VDE协会

Technologies for the Future 面向未来的技术



- Information and communications 信息与沟通
- Power 能源
- Medical engineering 医学工程
- Microelectronics 微电子学
- Micro and nanotechnology 微纳米技术
- Automation 自动化技术

Representations in Berlin and Brussels

Objective

Establish the VDE as a non-aligned, reliable and experienced first-to-talk-to partner in the political community

Mission

- introduce the VDE, its strengths and positions
- feed VDE positions into decision-making processes
- deliver knowledge and expertise to political stakeholders
- gather and process information on political developments in the fields of technology and education policy

柏林和布鲁塞尔的代表处

目标

在政治群体中把VDE建立成一个中立，可靠和经验丰富的第一合作伙伴

使命

- 宣扬VDE的长处和地位
- 将 VDE 定位到决策过程中
- 向政治利益相关者提供知识和专业知识
- 在技术和教育政策领域中获取和处理政治发展信息

Representations in Berlin and Brussels

Topics

- safety and standardisation
- technologies
- promotion of the next generation of engineers
- research funding programs, promotion of innovation

Cooperation with the political community

- VDE-discussion fora
- parliamentary events
- background talks
- media activities

Decision-making in the fields of technology and education policy based upon

- studies
- analyses
- position papers
- initiatives

柏林和布鲁塞尔的代表处

主题

- 安全和标准化
- 科技
- 发展新一代工程师
- 研究资助项目，促进创新

与政治团体的合作

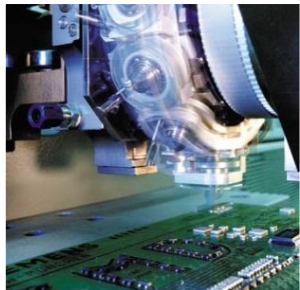
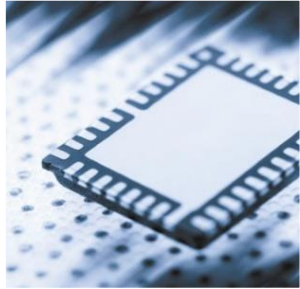
- VDE讨论论坛
- 议会活动
- 背景谈判
- 媒体活动

基于技术和教育政策的决策制定

- 学习
- 分析
- 意见书
- 积极性

Driving innovation: The VDE technical societies

驱动创新：VDE技术学会



ITG

Information Technology Society in the VDE
VDE信息技术学会

ETG

Power Engineering Society in the VDE
VDE电力工程学会

DGBMT

German Society for Biomedical
Engineering in the VDE
VDE德国生物医学工程学会

GMM

VDE/VDI-Society Microelectronics,
Microsystems and Precision Engineering
VDE/VDI学会微电子学，微系统和精密工程

GMA

VDI/VDE-Society for Measurement
and Automatic Control
测量和自动控制的VDI/VDE学会



9,200 members, founded in 1954

成立于1954年，拥有9,200个成员

Fields 领域

- Information society and focus projects 信息学会和焦点项目
- Services and applications 服务和应用
- Broadcasting, film and electronic media 广播，电影和电子媒体
- Audio communication 声频通信
- Communication technology 通信技术
- Technical informatics 科技信息
- High-frequency technology 高频技术
- Micro and nanotechnologies 微纳米技术
- Cross-disciplinary fields 跨学科领域



12,100 members, founded in 1974

成立于1974年，拥有12,100个成员

Fields 领域

- **Power Supply: 电源供应**
Electrical Power Generation; Power Transmission and Distribution; Power Economy 发电机设备；电力输配；动力经济
- **Application of Electrical Energy: 电能的应用**
Electrical Machines and Drives; Railways and Vehicles with Electrical Drives 电机和驱动器；电气驱动的铁路和车辆
- **General Technologies: 综合技术**
Power Electronics and System Integration; Materials, Electrical Insulations and Diagnostics; Contact Behavior and Switching
电力电子学和系统整合；材料，电子绝缘和诊断；接触性能和开关



2,500 members, founded in 1971

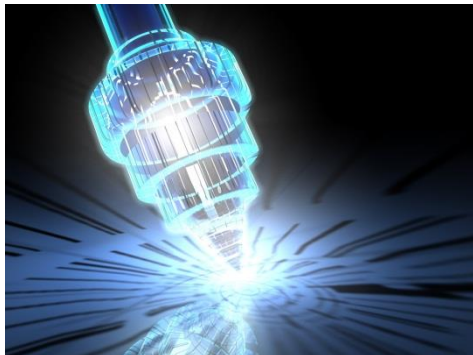
成立于1971年，拥有2,500个成员

Fields 领域

- Communication and information technology 通讯和信息技术
- Imaging and diagnostic systems 成像和诊断系统
- Therapy systems 治疗系统
- Medical technology and biotechnology 医学技术和生物技术
- Applied medical technology and clinical engineering
应用医学技术和临床工程

GMM

VDE/VDI-Society Microelectronics,
Microsystems and Precision Engineering
VDE/VDI学会微电子学，微系统和精密工程

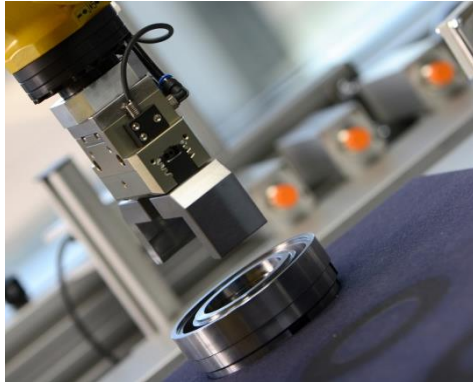


10,000 members, founded 1984

成立于1984年，拥有10,000个成员

Fields 领域

- Micro and Nanoelectronics - Manufacture 微纳电子学-生产商
- Micro and Nanoelectronics - Applications 微纳电子学-应用程序
- Precision Engineering and Mechatronics 精密工程和机电一体化
- Microsystem Technology and Nanotechnology
微系统技术和纳米技术
- Packaging, Systemintegration and Printed Circuit Board
Technology 包装，系统集成和印刷电路板技术
- Electronic Design Automation 电子设计自动化
- Electromagnetic Compatibility 电磁兼容性



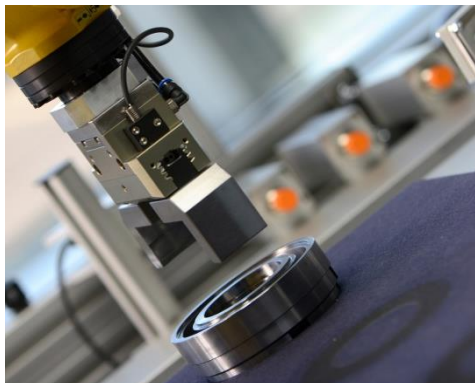
22,000 members, founded 1973

Fields

- Fundamentals and Methodology
- Sensors and Measuring Systems for Process Industry
- Sensors and Measuring Systems for Manufacturing Industry
- Actuators and Servo Systems; Mechatronics and Robotics
- Industrial Software and Communication
- Engineering and Operation
- Fields of Application of the Control and Automation Technology

GMA

测量和自动控制的VDI/VDE学会



成立于1973年，拥有22,000个成员

领域

- 基本原理和方法论
- 加工工业的传感器和测量系统
- 制造业的传感器和测量系统
- 制动器和伺服系统；机械电子学和机器人学
- 工业软件和通讯
- 工程与操作
- 控制和自动化技术应用领域



Secure and reliable design and operation of transmission and distribution grids

输配电电网安全可靠的设计与操作

Expert forum founded on June 1, 2008

专家论坛成立于2008年6月1日

Activities 活动

- VDE application regulations VDE申请条规
- Technical connection requirements 技术连接要求
- Technical security management 技术安全管理
- Quality of power supplies 电源供给质量
- Meter and measuring 仪表和测量
- Protection, instrumentation & control systems
保护，仪器和控制系统
- Geospatial information 空间信息



International norms and standards 国际规范和标准

VDE experts develop norms for greater safety and innovations

VDE专家为更大的安全和创新制定了规范

Around 3,500 technical experts to represent the interests of Germany in international (IEC) and European (CENELEC) standardization organizations

大约3500名技术专家代表德国在国际(IEC)和欧洲(CENELEC)标准化组织中的利益

We are a founding member of IEC, the world standardization organization

我们是世界标准化组织IEC的创始成员

The DKE German Commission for Electrical, Electronic & Information Technologies of DIN and VDE is the national organization in this field

DIN和VDE的DKE德国电子信息技术委员会是这个领域的国家组织

Legal Requirements 法律规定

Directives of the European Union 欧盟的指令

例如:

Product Safety Directive 产品安全指令 (2001/95/EC)

Low Voltage Directive 低电压指令 (2014/35/EU)

EMC Directive 电磁兼容性指令 (2014/30/EU)



**For the safety of the consumer or user of a product
the directives of the EC demand that products can only be placed
on the market, if they fulfill the basic safety and health requirements.**

**对于产品的消费者或用户的安全，欧盟委员会的指令要求产品只能在市场上销售，如果他们
满足基本的安全和健康需求**

Legal Requirements法律规定

例如

EC Directives 欧盟指令



Product Safety Directive (2001/95/EC)
产品安全指令(2001/95/EC)

Low Voltage Directive (2014/35/EU)
低电压指令(2014/35/EU)

EMC Directive (2014/30/EU)
电磁兼容性指令(2014/30/EU)



National Legislation 国家立法



Product Safety Act (ProdSG)
产品安全法(ProdSG)



1. Ordinance to the ProdSG
产品安全法条例



EMC Act (EMVG)
电磁兼容性法(EMVG)

Product Safety Act (ProdSG)

Area of application §1 (1) ProdSG

The Product Safety Act applies if products are made available on the market in the course of a commercial activity.

Definitions

- **Making available on the market** is any supply of a product for distribution, consumption or use on the Community market in the course of a commercial activity, whether in return for payment or free of charge. (§2 Nr. 4 ProdSG)
- **Products** are goods, substances or preparations produced through a manufacturing process. (§2 Nr. 22 ProdSG)

General requirements

General requirements for making products available on the market (§3 ProdSG):

- A product may only be made available on the market if it complies with EU directives and their requirements and if it does not endanger the safety and health of people under its intended and foreseeable use.

产品安全法(ProdSG)

应用范围 §1 (1) 产品安全法

产品安全法案适用于产品在商业活动中的市场上销售的产品。

定义

- 在市场上提供的任何产品都是在商业活动的过程中提供的产品的分销，消费或使用的产品，无论是作为回报还是免费的 (§2 Nr. 4 ProdSG)
- 产品是通过制造过程产生的货物、物质或制剂。 (§2 Nr. 22 ProdSG)

常规要求

在市场上生产产品的一般要求 (§3 ProdSG):

- 只有在符合欧盟指示和要求并且不危及人们在其预期和可预见的使用下的安全和健康的情况下，产品才可在市场上销售

Importance of harmonized standards

In assessing whether a product complies with the requirements, harmonized standards can be taken as a basis. (§4 (1) ProdSG)

Presumption of conformity:

If a product fulfills the requirements of the respective harmonized standard (in its current valid edition), it is presumed that the product also complies with the requirements concerning safety and health. (see §4 (2) ProdSG)

Harmonized standards have to be assigned to a directive and published in the Official Journal of the EU.

协调标准的重要性

在评估产品是否符合要求的情况下，协调标准可以作为一个基准。(§ 4 (1) ProdSG)

一致性假设:

如果产品符合各自的协调标准的要求(在当前的有效版本中)，则认为该产品也符合有关安全和健康的要求。(see §4 (2) ProdSG)

协调标准必须被分到某个指令，并在欧盟的官方期刊上发表。