CB Scheme

Aims, Members, Added Value

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TÜV SÜD Product Service GmbH, München
Special Thanks to Pierre de Ruvo, Executive Secretary of the IECEE CB Scheme
CB Scheme

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- PROCESS OF THE IECEE CB SCHEME – AIM – ACHIEVEMENTS
- STATISTICS
- IECEE DEVELOPMENTS AND OUTLOOK
- CB SCHEME – THE PASSPORT TO ACCESS WORLDWIDE MARKET
# STRUCTURE OF THE IECEE

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CB Scheme  The IEC Schemes

CONFORMITY ASSESSMENT BOARD

IECEE
System for conformity testing and certification of electrical equipment and components

IECEX
Scheme for explosive environments

IECQ
Quality assessment system for electronic components

CB Scheme
Mutual recognition of test data between certification bodies

CB FCS (full certification, including assessing QMS & Factory Audit/Inspection)
CB Scheme  IECEE Organisational Structure

CMC Certification Management Committee

- CAG Chairman’s Advisory Group
- AAG Assessment Advisory Group
- CTL Committee of Testing Laboratories
- Board of Appeal
CERTIFICATION MANAGEMENT COMMITTEE

- IECEE Officers
- CTL Chairman
- General Secretary and CEO of the IEC
- Member Body delegation (one per country) composed by 1 Head of Delegation and two Delegates
Executive Secretary IECEE

Ms Katharine Pearson
Assistant
Peer Assessment Program

Ms Cecilie Finstad
Assistant
Adherence to Standards

Ms Tara Mitchell
Assistant and Web-publisher
CB Scheme IECEE Officers

Gösta FREDRIKSSON
Chairman

Pierre de RUVO
Executive Secretary

Jun XIE
Vice-Chairman

Fritz BEGLINGER
Treasurer
CB Scheme  BOARD OF APPEAL

Chairman: Don MADER (UL)

Members

Bo YUMIN (CNCA)  Yoji ONO (JQA)  Joe GRYN (CSA)  Trond SOLLIE (NEMKO)

Deputies

Ted Gaertner (KEMA)  Jukka VUORINEN (SGS FIMKO)  Paul TAN (PSB)  Gerhard DREGER (VDE)
The Chairman’s Advisory Group is essentially composed by the Officers, the CTL Chairman and CMC delegates that are requested to advise on topics of interest for the overall IECEE Community
ACAG Members are formally appointed by the Management Committee

TERMS OF REFERENCE

- To monitor the Peer Assessment and Re-assessment
- To determine common understanding and approach on ISO/IEC Guide 65 and ISO/IEC 17025
- To evaluate the Assessment Reports of candidate NCBs and CBTLs and make recommendations to the IECEE-CMC
Well-founded “Mutual Confidence” is needed for NCBs to grant their Certification Mark on the basis of the review of Test Results without repeat testing; this is what Peer Assessments achieve.

Administered Globally by the IECEE Secretariat in Geneva using a registered pool of International Lead Assessors and Technical Assessors located in 43 different countries.
The evaluations made by QMS and Technical Experts, employed by the Organisations’ Members of the IECEE, ensure that the Members’ Certification Bodies and Testing Laboratories are competent in the processing of Conformity Assessment activities against essentially ISO/IEC Guide 65 and ISO/IEC 17025.
The FIC is the Factory Inspection Committee tasked to develop Procedures and Audit/Inspection Forms to be used as either a stand alone service or as part of the CB Full Certification Scheme.

The FIC is composed by experts in Factory Audits, Inspections, Follow up services.
To provide services related to Factory Audit/Inspection as a stand alone element of the Conformity Assessment Programme.

This Service can be used either as an element of the Supplier Declaration of Conformity SDoC or to upgrade a Certification System 1 into a Certification System 5.
System 5 Testing, Initial and FuS, certification mark

Upgrades into CB-FCS

Factory Audit/Inspection

System 1 Type Test Certificate
The CTL is the Technical branch of the IECEE and plays an essential role to build confidence.

Composed by experts from 200 Testing Laboratories and 60 Certification Bodies
The main tasks of the CTL are to:

- detail the way in which the tests related to the IEC EE have to be carried out so as to achieve the necessary reproducibility of test results,

- harmonize the design and use of the test equipment referred to in standards and to make recommendations to the relevant technical committee or subcommittee of the IEC for improvements of those standards,

- provide testing laboratories with a forum in which practical testing problems can be demonstrated and discussed
The task of the CTL is to:

- Organize Proficiency Testing Programmes under the auspices of the IECEE CMC

- Organize Workshops to analyze the results of PT programmes and subsequent test methodology to achieve consistent test results

- Carry out other technical work as directed by the CMC.
Manufacturer Testing Laboratories can also be accepted to operate within the IECEE under the responsible Certification Body NCB under strict rules and conditions.
CB Scheme MTL - Manufacturers Testing Laboratories

- NCB
  - Supervised Manufacturer Testing
- TMP
  - Testing at Manufacturer Premises
- WMT
  - Witness Manufacturer Testing
- RMT
  - Recognized Manufacturer Testing
CB Scheme Facts

- 46 participating countries
- 61 National Certification Bodies - NCBs
- 225 Testing Laboratories – CBTLs
- 50,000 certificates issued in 2006
- Over 400,000 current certificates
- More than 15,000 manufacturers using the CB Scheme
## CB Scheme: 19 Categories of Products

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<th>Short Designation</th>
<th>Category</th>
<th>IEC Standards</th>
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<td>BATT</td>
<td>Batteries</td>
<td>60086, 60099, 60254, 61809, 61960, 61982, 62133, 62259, 62281</td>
</tr>
<tr>
<td>CABL</td>
<td>Cables and Cords</td>
<td>60227, 60245, 60702, 60799</td>
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<tr>
<td>CAP</td>
<td>Capacitors as components</td>
<td>60252, 60384, 60939, 61048, 61049</td>
</tr>
<tr>
<td>CONT</td>
<td>Switches for appliances and automatic controls for electrical household appliances</td>
<td>60691, 60730, 60934, 61058, 61095, 61508, 61810</td>
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<tr>
<td>EMC</td>
<td>Electromagnetic Compatibility</td>
<td>CISPR 11, CISPR 12, CISPR 13, CISPR 14, CISPR 15, CISPR 16, CISPR 20, CISPR 22, CISPR 24, 60118, 60204, 60255, 60478, 60533, 60601, 60728, 60870, 60945, 60947, 60974, 61000, 61131, 61204, 61326, 61543, 61547, 61800, 61812, 62040, 62041, 62052, 62053, 62054, 62153, 62236</td>
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<tr>
<td>HOUS</td>
<td>Household and similar equipment</td>
<td>60312, 60335, 60342, 60436, 60456, 60530, 60704, 60705, 60967, 611770, 61817</td>
</tr>
<tr>
<td>INST</td>
<td>Installation accessories and connection devices</td>
<td>60083, 60309, 60320, 60423, 60439, 60614, 60669, 60670, 60684, 60807, 60884, 60974, 60998, 60999, 61011, 61076, 61084, 61210, 61238, 61242, 61316, 61386, 61800, 61984, 62094, 62208</td>
</tr>
<tr>
<td>LITE</td>
<td>Lighting</td>
<td>60064, 60155, 60238, 60360, 60400, 60432, 60570, 60598, 60838, 60901, 60921, 60922, 60924, 60926, 60927, 60928, 60929, 60968, 60969, 61046, 61047, 61050, 61184, 61195, 61199, 61231, 61347, 62035</td>
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<tr>
<td>MEAS</td>
<td>Measuring instruments</td>
<td>60414, 61010, 61557</td>
</tr>
<tr>
<td>MED</td>
<td>Electrical equipment for medical use</td>
<td>60580, 60601, 60976, 61676</td>
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<tr>
<td>MISC</td>
<td>Miscellaneous</td>
<td>60747, 60900, 60938</td>
</tr>
<tr>
<td>OFF</td>
<td>IT and office equipment</td>
<td>60825, 60950, 62040</td>
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<tr>
<td>POW</td>
<td>Low voltage, high power switching equipment</td>
<td>(60158), 60947, 62026, 62271</td>
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<tr>
<td>PROT</td>
<td>Installation protective equipment</td>
<td>60127, (60257), 60269, 60282, 60529, 60755, 60898, 61008, 61009, 61643</td>
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<tr>
<td>PV</td>
<td>Photovoltaics</td>
<td>60891, 60904 -1 to 10 , 61194, 61215, 61345, 61646, 61702, 61721, 61829, 62093, PVRS11, PVRS11A</td>
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<tr>
<td>SAFE</td>
<td>Safety transformers and similar equipment</td>
<td>60044, 60742, 61558</td>
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<tr>
<td>TOOL</td>
<td>Portable tools</td>
<td>60745, 61029, 61939</td>
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<tr>
<td>TOYS</td>
<td>Electric Toys</td>
<td>62115</td>
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<tr>
<td>TRON</td>
<td>Electronics, entertainment</td>
<td>60065, 60491, 61965</td>
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<td>Country</td>
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<tr>
<td>Argentina</td>
<td>India</td>
<td>Romania</td>
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<td>Australia</td>
<td>Indonesia</td>
<td>Russia</td>
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<td>Austria</td>
<td>Ireland</td>
<td>Singapore</td>
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<td>Belgium</td>
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<td>Brazil</td>
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<td>Canada</td>
<td>Japan</td>
<td>South Africa</td>
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<td>China</td>
<td>Kenya</td>
<td>Spain</td>
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<td>Denmark</td>
<td>Malaysia</td>
<td>Switzerland</td>
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<td>Finland</td>
<td>Mexico</td>
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<td>France</td>
<td>Netherlands</td>
<td>Turkey</td>
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<td>Germany</td>
<td>New Zealand</td>
<td>Ukraine</td>
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<td>Greece</td>
<td>Norway</td>
<td>United Kingdom</td>
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<td>Hungary</td>
<td>Poland</td>
<td>United States</td>
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<td>Portugal</td>
<td>Serbia and</td>
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<td></td>
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<td>Montenegro</td>
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### CB Scheme NCB – National Certification Bodies

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<th>Americas</th>
<th>Europe</th>
<th>Asia/Africa/Far East/Oceania</th>
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<tbody>
<tr>
<td>CSA</td>
<td>OVE</td>
<td>SAI Global</td>
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<tr>
<td>ITSC</td>
<td>CEBEC</td>
<td>CQC</td>
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<tr>
<td>ULC</td>
<td>Electrosuisse</td>
<td>BIS</td>
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<tr>
<td>UL Inc.</td>
<td>EZU</td>
<td>STQC</td>
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<tr>
<td>MET</td>
<td>VDE</td>
<td>JET</td>
</tr>
<tr>
<td>ITS, N.A.</td>
<td>TUV Rh DE</td>
<td>JQA</td>
</tr>
<tr>
<td>TUV Rheinland, NA.</td>
<td>TUV P.S. DE</td>
<td>TUV Rheinland, JP</td>
</tr>
<tr>
<td>FMRC</td>
<td>SLG</td>
<td>UL APEX</td>
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<tr>
<td>IRAM</td>
<td>LGA</td>
<td>KTL</td>
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<td>UCIEE</td>
<td>ETS</td>
<td>KETI</td>
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<td>DEMKO</td>
<td>SABS</td>
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<td>FIMKO</td>
<td>PSB</td>
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<td>SIRIM</td>
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CB Scheme Objectives

- A global solution for a global market
- Provision of a framework for global conformity assessment
- Partners with standards in facilitating international trade
- Elimination of multiple testing, except for national differences
- Elimination of multiple quality audits
- Increased access to market
- Reduced time to market
- Increased confidence
- Reduced costs – increased trade
- Acceptance by the Regulators
CB Scheme  Global conformity assessment

- CB Test Certificates and associated Test Reports issued by NCB in one country accepted by NCBs in other member countries for purposes of national certification
- CB Test Certificates and associated Test Reports accepted by several Regulatory Authorities
- CB Test Certificates and associated Test Reports directly accepted by Retailers, Buyers, Vendors worldwide
- Reduced testing and certification costs
- Capacity to eliminate multiple unnecessary national certifications
- Portable conformity assessment
The ideal target

One test

One certification

One mark
Today’s IECEE achieved target

One test

One international certificate

One or more marks as needed
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CB Scheme  Aim
The aim of the CB Scheme is to provide Manufacturers seeking worldwide third party certification marks, the most economic and cost effective procedures within the best certification time frame.
CB Scheme  Highlights

• Reciprocal recognition of test results among all participating Certification Bodies, to simplify granting of certification or approval at national levels.
• CB Test Certificates and associated Test Reports facilitates obtaining secondary certifications.
• The CB Scheme is the only internationally recognized scheme for the safety of electrical equipment used in homes, offices, workshops and similar locations.
• Products are tested to IEC standards with provision for supplementary testing for national differences.
CB Scheme Advantages

- More rapid testing and certification
- More universal product recognition
- Acceleration of Product Acceptance
- Direct acceptance by the Authorities in many countries
- Direct acceptance by the Retailers and Buyers
- Expanded markets
- Faster product movement from plants to markets
• 19 product categories ranging from Information Technology and electronic equipment, household, medical equipment, lighting to EMC, and Photovoltaics but 60% of activity is concentrated in these three areas:
  – Household appliances
  – Office & IT equipment
  – Electronics / entertainment
Time to Market is essential

- In Manufacturing and Trade every day counts
- Buyers, Users and Governments need assurance of compliance
CB Scheme Benefits

- Leads to safer products on domestic market
- Needs to become even more efficient to provide fast time-to-market to suppliers
  and will make the world’s products available to your domestic professional buyer and consumer
CB Scheme

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- Objectives of the CB Scheme
- Process of the IECEE CB Scheme – Aim – Achievements
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- IECEE Developments and Outlook
- CB Scheme – The Passport to Access WorldWide Market
2006 has resulted in another great year with a significant growth of the Issued CB Test Certificates. It has to be noted that a significant number of CB Test Certificates are directly recognized by Buyers, Retailers and Regulatory Authorities to provide direct access to the global markets.
CB Scheme Yearly issued CB Certificates

- 1994: 4917
- 1996: 6237
- 1998: 7794
- 2000: 9825
- 2002: 12175
- 2004: 15893
- 2006: 19597
- 2008: 24259
- 2010: 34117
- 2012: 36465
- 2014: 40817
- 2016: 50278

Certificates: 0, 10000, 20000, 30000, 40000, 50000, 60000
CB Scheme Statistics

Number of IECCEE Certificates Issued and Recognized from 1996 to 2006

- Recognized
- Issued


Certificates:
- 1996: 5,398
- 1997: 7,794
- 1998: 5,477
- 1999: 7,025
- 2000: 14,213
- 2001: 15,893
- 2002: 15,893
- 2003: 24,298
- 2004: 18,705
- 2005: 16,026
- 2006: 16,811

Total:
- Recognized: 98,177
- Issued: 108,272
CB Scheme Statistics

Top 10 Product Categories in the CB-Scheme 2004 - 2006

IECEE Product Categories

Number of IECEE Certificates issued

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12000 13000 14000 15000 16000 17000 18000 19000 20000

MEAS, 61010 CONT, 60730 TOOL, 60745 INST, 60669 MED, 62601 LITE, 60596 Other Product Categories TRON, 62665 HOUS, 60335 OFF, 60953

2004 2005 2006
CB Scheme Statistics

Top 10 Recognized Product Categories in the CB-Scheme
2004 - 2006

Number of IECEE Certificates recognized

IECEE Product Categories

POW, 60947
PROT, 60127
MED, 60601
LITE, 60598
Other Product Categories
TOOL, 60745
INST, 60609
TRON, 60065
HOUS, 60335
OFF, 60950

2004
2005
2006
CB Scheme Statistics

TOP 10 FACTORY LOCATIONS IN 2006

FACTORIES

China 27786
Japan 4298
Chinese Tapei 4281
Korea, Republic Of 3879
United States Of America 2376
Malaysia 2261
Thailand 2174
Italy 2075
Germany 1555
Brazil

COUNTRY OR PLACE
CB Scheme Statistics

TOP 10 FACTORY LOCATIONS IN

FACTORIES

COUNTRY OR PLACE

China
Germany
Indonesia
Italy
Japan
Korea, Republic Of
Malaysia
Chinese Taipei
Thailand
United States Of America
Brazil

TÜV SÜD Product Service GmbH

(c) Dr. Wolfgang Kreinberg
CB Scheme Statistics

CB Certificates 2006

- TOOLS: 1%
- TOYS: 0%
- SAFE: 0%
- PV: 0%
- PROT: 1%
- POW: 1%
- OFF: 43%
- TRON: 17%
- HOUS: 25%
- INST: 2%
- LIFE: 2%
- MÉS: 2%
- MISC: 2%
- CONT: 1%
- EMC: 0%
- BATT: 0%
- CAP: 0%
- CABL: 0%
- MED: 2%
- MEAS: 3%
- MISC: 0%

CB Certificates 2006
Top 10 Issueing NCB

- JP TÜV: 15.8%
- SE SEMKO: 12.2%
- NO NEMKO: 10.4%
- DE3 TPS: 9.1%
- DE2 TRPS: 3.5%
- US1 UL: 4.3%
- NL KEMA: 4.3%
- CN-CQC: 5.1%
- DE1 VDE: 5.5%
- Rest: 23%

Statistics
CB Scheme Development and Outlook

- Factory Audit Procedures and Forms
- Electromagnetic Compatibility
- Hazardous Substances
- Component Recognition Program
- Photovoltaic and Renewable Energies
- Collaboration with ILAC and IAF Accreditation Bodies
CB Scheme Tailor Made for the Customer

Safety Requirements plus:

- Performance requirements
- Regulatory requirements
- EMC requirements
- Ergonomic, Hygienic requirements
Because Globalization and competition are leading to rapid changes, technical barriers to trade remain a serious problem and the industry is anxious about time to market, the shortening life cycle of products and the need to reduce costs…

The CB Scheme offers de facto the true “passport” for the needs of different countries.

The CB Scheme answers de facto the market needs to have a Test Certificate tailored to be recognized worldwide.

The CB Scheme, in its fullest extent, proves de facto that certification and testing costs can be reduced through the use of... one stop testing.
CB Scheme Further Information

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Pierre de RUVO
E-mail: pro@iec.ch
Tel: +41 22 919 02 07
Thank you