



STRATEGIC BUSINESS PLAN (SBP)

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|---------------|----------------|-------------------|
| IEC/TC OR SC: | SECRETARIAT: | DATE: |
| TC89 | Germany | 2018-11-26 |

Please ensure this form is annexed to the Report to the Standardization Management Board if it has been prepared during a meeting, or sent to the Central Office promptly after its contents have been agreed by the committee.

A. STATE TITLE AND SCOPE OF TC

Are there any new or emerging trends in technology that will impact the scope and work activities of the TC? Please describe briefly.

Do you need to update your scope to reflect new and emerging technologies? If yes, will these changes impact another TC's scope or work activities?

If yes, describe how these will impact another TC(s) and list the TC(s) it would impact

TC89 – Fire Hazard Testing

A.1

Scope:

To prepare international standards, technical specifications and technical reports in the areas of:

→ Fire hazard assessment, fire safety engineering and terminology as related to electrotechnical products.

→ Measurement of fire effluent (e.g. smoke, corrosivity, toxic gases and abnormal heat), and reviews of the state of the art of current test methods as related to electrotechnical products.

→ Widely applicable small-scale test methods for use in product standards and by manufacturers and regulators.

TC89 publications are clustered in the IEC 60695 series (see Section I).

Horizontal safety function: (Assigned by ACOS – Advisory Committee for Safety)

Guidance and test methods for assessing fire hazards of electrotechnical equipment, their parts (including components) and electrical insulating materials.

A.2

Background:

TC89 was formed in November 1988 by the decision of the IEC Council (see RM 3139/Council Decision 29/88) to transform SC 50D Environmental testing – Fire hazard testing into a full technical committee. It was agreed that the fundamental aspect of fire warranted its own technical committee. Council also agreed to transfer the flammability testing of solid insulating materials from SC15A to the new TC89. In June 1988 the secretariat was transferred from Germany to Canada (see RM 3379 March 1991, page 16). After many years of excellent and distinguished service, regrettably, Canada

relinquished the secretariat. With the decision made by SMB/4279A/RV, it was approved to allocate the secretariat to Germany, effective November 2010.

TC89 is a technical committee with a horizontal safety function (formerly known as a horizontal committee) within the IEC to give guidance and develop standards and test methods related to fire hazards for use by other IEC Committees.

TC89 has been given the responsibility by the SMB (Standardization Management Board) to write BSPs (Basic Safety Publications) which are publications on a specific safety-related matter, applicable to many electrotechnical products under the aegis of the now mandatory (see AC/35/2010) IEC Guide 104, The preparation of safety publications and the use of basic safety publications and group safety publications, plus ISO/IEC Guide 51, Safety aspects – Guidelines for their inclusion in standards. An IEC Guide is a document published by ISO or IEC giving rules, orientation, advice or recommendations relating to international standardization. IEC Guides may contain mandatory and non-mandatory text.

TC89 monitors the work of pertinent ISO (International Organization for Standardization) committees to avoid duplication of effort and resources. TC89 monitors the more fundamental work of fire related ISO committees, and assesses its usefulness for the specific electrotechnical environment, adopting or adapting if necessary as a means of confirming that TC89 aims to avoid duplication of effort and resources.

B. MANAGEMENT STRUCTURE OF THE TC

Describe the management structure of the TC (use of an organizational chart is acceptable) (should be integrated by CO automatically) and, if relevant (for example an unusual structure is used), provide the rationale as to why this structure is used.

Note: Check if the information on the IEC website is complete.

When was the last time the TC reviewed its management structure? Describe any changes made. When does the TC intend to review its current management structure? In the future, will the TC change the current structure, for example due to new and emerging technologies, product withdrawal, change in regulations etc. Please describe.

Make sure the overview includes:

- any joint working groups with other committees,
- any special groups like advisory groups, editing groups, etc.

TC 89 Officers

| | |
|-------------------|---|
| Chair | Mr Thomas Korssell (SE) Term of office : 2023-01 |
| Vice-Chair | Mr Uberto Vercellotti (IT) Term of office : 2020-10 |
| Secretary | Mr Thomas Georg Kapper (DE) |



| Label | Title |
|--------------------------------|--|
| Working Groups | |
| WG 11 | Fire effluent (corrosivity, heat release, smoke, toxicity), fire hazard assessment, fire safety engineering, flame spread, general guidance, and terminology |
| WG 12 | Test flames and resistance to heat. Small scale heat and flame test methods |
| Project Teams | |
| PT 60695-1-13 | Classification Guidance Document for PC |
| PT 60695-1-14 | IEC/TS 60696-1-14: Guidance for assessing the fire hazard of electrotechnical products |
| PT 60695-2-14 | Glow-wire ignition tests for end products |
| PT 60695-2-15 | Hot Coil Ignition Test on end products |
| PT 60695-2-20 | Hot wire ignition test |
| PT 60695-11-2 | Round Robin testing with the 1kW flame |
| PT 60695-11-5 | Needle Flame Test |
| Advisory Groups | |
| AG 13 | Chairman's Advisory Group |
| Joint Maintenance Teams | |
| JMT 4 | Maintenance of IEC/TR 62757 Ed.1 Managed by SC 22F |

TC89 membership:

16 P-Members: BE, CA, CN, CZ, DE, ES, FR, GB, IT, JP, NL, PT, RU, SE, TR, US

19 O-Members: AT, BG, BR, BY, DK, FI, GR, HU, IN, KR, NO, NZ, PL, RO, RS, SK, TH, UA, ZA

TC89 stakeholders represent a broad variety of categories, such as industry (e.g. components / end product manufacturers and material suppliers), testing bodies, public authorities, universities, trade organizations, other TC/SC's, etc.).

Most current information on the organizational set-up of TC89 can be found on the IEC web under URL: http://www.iec.ch/dyn/www/f?p=103:7:0:::FSP_ORG_ID:1283 – then select the "Structure" tab.

C. BUSINESS ENVIRONMENT

Provide the rationale for the market relevance of the future standards being produced in the TC.

If readily available, provide an indication of global or regional sales of products or services related to the TC/SC work and state the source of the data.

Specify if standards will be significantly effective for assessing regulatory compliance.

Fire safety is a concern in every geographical region, and TC89 seeks to establish global methods and guidance for assessing fire hazard in electrotechnical products.

There is a rapid global increase in the use of electrotechnical products in all application areas. The main reasons for this are the revolution in IT systems, consumer electronics, household appliances, the demand for increased functionality in buildings, structures and transport, and the general development of the infrastructure in developing economies.

Uncontrolled fires and their effluent are perceived as a significant environmental concern.

In the developed world, fire claims 10 to 20 people per million of population per annum, and fire losses amount to approximately 0,2 % of GDP per year. Occupied buildings account for the majority of fatal fires.

Electrotechnical products present two particular potential hazards in that:

- they contain or convey electrical energy and, therefore, may be a source of ignition; and
- they may be an avenue of fire spread.

TC89 has published a series of BSPs on ignition. The primary aim of using such test methods is to prevent ignition caused by an electrically energized component part but, in the event of ignition, to confine any resulting fire within the bounds of the enclosure of the electrotechnical product. Reducing the risk of ignition to near zero is the most effective way to minimize fire hazard.

In common with many other safety related standardisation activities, TC89 aims to establish a basis for assessing fire hazard which facilitates an objective evaluation and trade-off between adequate safety and minimum overall cost. Therefore, TC89 is working closely with a core group of IEC PCs (Product Committees) to develop and maintain a broad portfolio of publications for fire safety.

Every IEC member nation that manufactures electrotechnical products is encouraged to use the same basic test methods that are produced and maintained by TC89.

D. MARKET DEMAND

Provide a list of likely customers of the standards (suppliers, specifiers, testing bodies, regulators, installers, other TC/SC's etc.). Do not specify company names, only categories of customers.

TC89 publications are mainly used by IEC PCs. Before approaching any fire hazard testing they are required to perform an FHA (Fire Hazard Assessment) on their products and to consult with IEC Guide 104 to understand their responsibilities with respect to TC89.

TC89 publications are also used by regulators, manufacturers, test laboratories and specifiers etc., most of whom are actively represented in TC89. TC89 publications are widely harmonized and used at the regional (e.g. European Standards) and national level.

Some IEC committees that make reference to TC89 publications are: TC10, TC14, TC20, SC22F, SC23A, TC46, TC61, SC86A, TC99, TC104, TC108, TC112 and SC121A, most of them being in liaison with TC89.

Advances in the understanding and use of FSE (Fire Safety Engineering) will have a positive effect on the demand for TC89 publications, especially for test methods which provide performance based data in a format suitable for use in FSE. TC89 has published a guidance document concerning FSE (IEC 60695-1-12).

TC89 also issues technical specifications and reports which review the current state of the art in fire hazard testing, and provide a critical and objective assessment of current test methods. The purpose of these technical specifications and technical reports is also to provide guidance to IEC technical committees on the selection and use of these published test methods (which are often not IEC methods), and to avoid inappropriate or extended use of outdated, or technically deficient methods.

Some of the IEC 60695-x-2 series of publications provide information about the "repeatability and reproducibility" and "relevance of test data" with guidance on the use of current test methods.

There has been a steady effort in TC89 to harmonize test methods, coming mainly from UL (Underwriters Laboratories Inc.) with similar IEC publications.

Development of standardization within TC89 continues to be very active and the amount

of work on the maintenance of current standards is growing.

E. TRENDS IN TECHNOLOGY AND IN THE MARKET

If any, indicate the current or expected trends in the technology or in the market covered by the products of your TC/SC.

E.1

Technology:

One key driver in the field of TC89 is the rapid growth in information technology systems, consumer electronics, household appliances and automation technology, particularly relating to the accommodation of electrical and data systems into the structure of buildings.

The trend is now away from the former pass/fail criteria toward the use of test methods able to monitor and/or measure the many fire parameters used in FSE and fire models.

It is a reasonable assumption that the basic TC89 test methods will remain unchanged for the foreseeable future but the technical details will continue to be refined as necessary. Also, new test methods may be developed to cover the needs of future technologies.

E.2

Market:

The market wishes ideally to see a contraction in the various and differing test methods that essentially measure the same thing. TC89 seeks to advise in favour of adopting or adapting/extending existing methods and deprecates the introduction of new, seemingly parallel, methods.

F. SYSTEMS APPROACH ASPECTS (REFERENCE - AC/33/2013)

Does your TC/SC have a need for a systems approach?

If so:

- Will the Systems work be in a single TC or in multiple TCs?
- Will a Systems Evaluation Group (SEG), Systems Committee (SyC), or Systems Resource Group be required?
- Is your TC/SC work of relevance to ISO?
- Is or are there fora or consortia working in parallel to IEC? Is there a chance to integrate this work in your TC/SC?

This should not only be restricted to the customer/supplier relationships with other TC/SCs indicating types of co-operation (e.g. liaisons, joint working groups) but be of a more generic nature.

If there is no need for a systems approach as outlined in AC/33/2013, is it intended a TC would not be requested to report on general systems approach considerations such as customer/supplier relationships, liaisons, joint WGs, etc. as referenced in the system approach matrix illustrated in slide 14 of the presentation attached to AC/37/2006?

Not applicable to TC 89 – see AC/37/2006.

However, TC89 strictly follows the principles laid down in IEC Guide 104 and ISO/IEC Guide 51, when developing Fire safety standards. Such documents are Basic Safety Publications (BSPs), which serve as a basis for Product standards in the entire IEC.

G. CONFORMITY ASSESSMENT

With reference to clause 33 of Part 2 of the ISO/IEC directives, are all your publications in line with the requirements related to conformity assessment aspects?

Will the TC/SC publications be used for IEC Conformity Assessment Systems (IECEE, IECEx, IECQ, IECRE)?

Will any of your standards include test specifications, reproducible test requirements, and test methods?

Are there likely to be special conformity assessment requirements generated by any standards projects? If yes, list which projects.

According to ISO/IEC Directives the two types of activities existing within IEC, namely standard development and conformity assessment, should be absolutely independent from each other. As TC89 is involved into standard development for BSPs, it is impossible for us to formally develop conformity assessment systems.

However, where applicable, TC89 standards specify requirements as well as test methods that allow repeatable and reproducible test results.

H. HORIZONTAL ISSUES

Indicate here how the TC/SC deals with horizontal issues such as energy efficiency, environmental aspects, safety, security...

Provide information on the interaction with SMB Advisory Committees, if applicable.

H.1

Liaison with ACOS – Advisory Committee for Safety
→ Assigned Horizontal safety function (see Section A)

H.2

Liaisons with other TCs/SCs (IEC and ISO)

TC 89 Liaisons

| Committee | Description |
|-----------------------------|--|
| Internal IEC Liaison | |
| TC 10 | Fluids for electrotechnical applications |
| TC 14 | Power transformers |
| TC 20 | Electric cables |
| SC 22F | Power electronics for electrical transmission and distribution systems |
| SC 23A | Cable management systems |
| TC 46 | Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories |
| TC 61 | Safety of household and similar electrical appliances |
| SC 86A | Fibres and cables |
| TC 99 | Insulation co-ordination and system engineering of high voltage electrical power installations above 1,0 kV AC and 1,5 kV DC |
| TC 104 | Environmental conditions, classification and methods of test |
| TC 108 | Safety of electronic equipment within the field of audio/video, information technology and communication technology |
| TC 112 | Evaluation and qualification of electrical insulating materials and systems |
| SC 121A | Low-voltage switchgear and controlgear |
| Liaison ISO | |
| ISO/TC 61/SC 4 | Burning behaviour |
| ISO/TC 92 | Fire safety |
| ISO/TC 92/SC 1 | Fire initiation and growth |
| ISO/TC 92/SC 3 | Fire threat to people and environment |

I. 3-5 YEAR PROJECTED STRATEGIC OBJECTIVES, ACTIONS, TARGET DATES

I.1

IEC 60695 Series – Clusters

- Cluster 1 – Guidance for assessing the fire hazard of electrotechnical products
- Cluster 2 – Glowing/hot-wire based test methods
- Cluster 4 – Terminology
- Cluster 5 – Corrosion damage effects of fire effluent
- Cluster 6 – Smoke obscuration
- Cluster 7 – Toxicity of fire effluent
- Cluster 8 – Heat release
- Cluster 9 – Surface spread of flame
- Cluster 10 – Abnormal heat
- Cluster 11 – Test flames

I.2

Strategic objectives and activities

According to I.1, the following strategic objectives, etc. are defined.

I.2.1 – Objectives – General

- to improve the market relevance of TC89 publications
- to develop and improve TC 89 standard
- to provide guidance to electrotechnical product committees
- to provide information to electrotechnical product committees about potentially relevant test methods (not necessarily TC89 test methods) with guidance on their suitability
- to define electrotechnical fire terms

- to provide appropriate guidance for TC89 test methods
- to increase the awareness within the IEC of TC 89 publications and test methods
- to continue to be responsive to the growing needs for fire hazard guidance for electrotechnical products as they arise
- to continue to attract more experts from the fire sciences to increase the pool of knowledge
- to hold seminars and workshops whenever necessary
- to assist PCs in all matters related to fire

1.2.2 – Activities – General

- to complete test method questionnaires and inter-laboratory tests on problematic TC89 test methods and integrate the results into future revisions where applicable
- to eliminate, with the assistance of the IEC, the use of “rogue” test methods in PCs publications that are similar to TC89 but lack any normative references
- with the assistance of the IEC, to identify and work with all PCs that reference TC89 publications
- continue as an active member of ACOS (Advisory Committee on Safety)
- monitor our customers and the degree to which they take up TC89 guidance
- work in close cooperation with the IEC, ACOS, ISO, PCs, industry etc. to achieve the stated objectives
- the action plan for TC 89 is the time frame indicated by the maintenance cycle. The work is done by WGs meeting every 6 months, by timely responses from the NCs, and by the secretary and WG conveners working together effectively
- complete agreed maintenance review schedules on time to ensure timely publication of any amendments and revisions
- monitor, on a continuous basis, all IEC procedural changes and integrate relevant changes into the TC89 work flow
- promptly attend to all technical enquiries in a timely manner

| STRATEGIC OBJECTIVES 3-5 YEARS | ACTIONS TO SUPPORT THE STRATEGIC OBJECTIVES | TARGET DATE(S) TO COMPLETE THE ACTIONS |
|--|---|--|
| Maintenance of the existing publications in the areas of Terminology, Corrosion, Smoke obscuration, Toxicity and Surface spread of flame | WG11 Maintenance work | 2018 – 2022 |
| Maintenance of the existing 4 Glow-wire publications IEC 60695-2-10, 2-11, 2-12 and 2-13 | WG12 Maintenance work | 2018 – 2022 |
| Development of an optimized test method for “Hot wire coil testing (HCI)” IEC TS 60695-2-20 | PT60695-2-20 Project work, includes Round Robin Testing | 2018 – 2019 |
| Development of a new test method for “Fire containment tests for end products” IEC TS 60695-2-21 | PT60695-2-21 Project work, PWI and Round Robin Testing | 2018 – 2020 |
| Continuation of the active | Nomination of the TC | 2018 – 2022 |

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|---|--|--|
| participation in ACOS | representative for the “Fire hazard testing” topic | |
| Note: The progress on the actions should be reported in the RSMB. | | |

This SBP is subject for reconfirmation or revision at every TC89 Plenary meeting.

Dr. Thomas Korssell (SE)
Chair

Dr. Uberto Vercellotti (IT)
Vice-Chair

Thomas G. Kapper (DE)
Secretary

2018-11-20
