



## STRATEGIC BUSINESS PLAN (SBP)

IEC/TC or SC TC 116	Secretariat USA	Date 2013-06
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Title of TC  
SAFETY OF MOTOR-OPERATED ELECTRIC TOOLS

### A Background

During an SC 61F meeting held in Mississauga (Toronto), Canada on 2008-05-08, it was unanimously agreed that SC 61F should become a separate IEC Technical Committee. TC 116 was established as a result of this agreement. The scope of this new Technical Committee would remain the same as SC 61F, i.e. "to prepare international safety standards for hand-held and transportable motor-operated electric tools and gardening appliances".

At the time that TC 116 was established, it was responsible for thirty-eight standards as summarized below:

- Five Part 2 standards aligned with IEC 60335-1.
- IEC 60745-1 (General Requirements for Hand-Held Tools) plus twenty related Part 2 standards.
- IEC 61029-1 (General Requirements for Transportable Tools) plus eleven related Part 2 standards.

TC 116 has subsequently added four Part 2's to its scope of work.

Since its creation, TC 116 has focused on the development of a new General Requirements standard for electric motor-operated tools and lawn and garden machinery (referred to as "electric tools" in the remainder of this document) that would replace the three Part 1 standards (IEC 60335-1, 60745-1 and 61029-1) currently in use. This will in turn require the realignment of all existing Part 2 standards.

### B Business Environment

#### B.1 General

**External:** The work of TC 116 continues to be highly relevant and very important to stakeholders, due to the ongoing interest in product certification and the increased desire for harmonised product safety standards. This harmonisation is becoming increasingly important in a global economy.

Safety standards are vital for the electric tool industry in order to manage the risk associated with these products while keeping pace with new technologies.

TC 116 standards are adopted by many countries as their national standard with national deviations added. Additionally, these standards are used for certification purposes in the IECEE scheme, and the certificates issued are used to obtain or cover market approval requirements internationally.

**Internal:** TC 116 aims to produce and maintain international standards relating to the safety of electric tools in a manner that is timely, efficient and which keeps pace with modern technology. The standards produced will fulfil the needs of certification bodies, consumers, manufacturers and national authorities responsible for safety. The requirements are written with the goals of minimising risks to an acceptable level as well as facilitating international trade in electric tools by minimising the need for national differences in countries that adopt the standards.

#### B.2 Market demand

The stakeholders for TC 116 standards include consumers, manufacturers of electric tools, certification and testing laboratories, retailers and national (local) inspection authorities. These groups, except for

retailers, are actively represented on the committee. At present there is no difficulty in obtaining active stakeholder participation. The standards produced by this committee have attained wide use internationally at both the regional and national levels.

The electric tool industry is well established and the coverage of the current standards produced by TC 116 is sufficient for most products. However, advances in battery technology have fueled the growth in cordless products relative to the traditional mains-operated products. Accordingly, much of the recent standards development has been related to the safety aspects of these cordless products.

At the present time, TC 116 utilises three general requirements standards (IEC 60335-1, 60745-1 and 61029-1). The development of a single new general requirements standard (IEC 62841-1) to replace the existing standards will be a significant step towards further harmonisation and its related benefits to stakeholders.

### **B.3 Trends in technology**

The use of electronic circuits (including programmable elements) to provide a safety related function will significantly impact the design and construction of electric tools in the future.

Advances in battery technology allow increased energy storage per unit volume and will influence product designs in the future.

### **B.4 Market trends**

The standards produced by TC 116 are used in many countries to show compliance with the specific country legal requirements promulgated to govern safety of electrical equipment. Consequently, ensuring the global relevance of TC 116 standards continues to be of prime importance. Use of TC 116 standards reduces the need for manufacturers to carry out a risk analysis relating to product safety since such an analysis is covered by the safety requirements in the TC 116 standards.

### **B.5 Ecological environment**

Requirements covering the impact of electric tools on the ecological environment are not within the scope of TC 116. To a certain extent, safety requirements are written so as to take into account the industry's need to use environmentally friendly materials. Other environmental aspects relating to electric tools are within the scope of other committees such as SC 77A, CISPR/F, TC 106 and TC 111.

## **C System approach aspects**

In accordance with the IEC system approach to standardisation, TC116 is a customer committee of the following IEC component committees.

TC20	Electric cables
SC 21A	Secondary cells and batteries containing alkaline or other non-acid electrolytes
SC 23B	Plugs, socket-outlets and switches
SC 23C	World-wide plug and socket-outlet systems
SC 23E	Circuit-breakers and similar equipment for household use
SC 23F	Connecting devices
SC 23G	Appliance couplers
SC 23H	Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles
SC 23J	Switches for appliances
SC 32C	Miniature fuses
TC 33	Power capacitors and their applications
SC 34B	Lamp caps and holders
TC 40	Capacitors and resistors for electronic equipment
SC 47E	Discrete semiconductor devices
TC 72	Automatic electrical controls
TC96	Transformers, reactors, power supply units, and combinations thereof

The customers of TC 116 standards and the products designed and manufactured to TC 116 standards are Regulatory Authorities responsible for safety and consumers who purchase the products. Consequently to ensure that Regulatory Authorities responsible for safety have confidence in using TC 116 standards in their regulations and to ensure the safety of consumers who use the products designed and manufactured to TC 116 standards, all components used in electric tools must be such that they do not compromise the ability of the product to meet the requirements of the relevant standard when incorporated as specified by the manufacturer.

## **D Objectives and strategies (3 to 5 years)**

The objectives of TC 116 are as follows:

1. Maintain and develop standards necessary for manufacturers of electric tools, the safety of users of these products, national authorities responsible for product safety and bodies responsible for certifying product safety.
2. Engage with component committees identified under the system approach aspect to ensure that component standard safety requirements are compatible with the safety requirements in IEC 60335-1 and 62841-1.
3. Continue to identify new technical areas requiring attention, and assign projects to existing working groups or establish new working groups or project teams as appropriate.

## **E Action plan**

### Objective D-1

- Complete the development of the new Part 1 standard IEC 62841-1 in the defined time frame.
- Develop parts 2, 3 and 4 particular requirements standards that align with IEC 62841-1 that will replace all existing TC 116 Part 2 standards. The general numbering scheme will be as follows:
  - IEC 62841-2-XX: Particular requirements for hand-held tools
  - IEC 62841-3-XX: Particular requirements for transportable tools
  - IEC 62841-4-XX: Particular requirements for lawn and garden machinery
- On an annual basis, identify new product types requiring new standard development.
- On an annual basis, identify existing TC 116 standards that require maintenance.
- Encourage participation in TC 116 from new countries that express an interest in TC 116 activities, especially those from emerging economies and developing countries.

### Objective D-2

- Review all TC 116 liaisons at each Plenary meeting and identify potential new liaisons as appropriate.
- Review other activities in IEC and ISO and consider the impact on TC 116. Determine where TC 116 input/expertise will be needed.
- Continue to develop guidance for addressing functional safety using electronic circuits, including those with programmable elements.
- Review component committee standards and drafts for change. Comment on the drafts when necessary to ensure their compatibility with TC 116 safety requirements.

### Objective D-3

- Continuously consider market trends and impacts, and identify areas for improvement and/or development.
- Encourage National Committees to provide input on a continuous basis.

## **F Useful links to IEC web site**

[The TC 116 Dashboard](#) provides access to the following information:

- Scope
- Membership
- Officers
- Liaisons
- Working Groups and Maintenance Teams
- Work Programme
- Publications
- Stability Dates
- Working Documents
- Documents Open for Vote

Name of the secretary:

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