IEC WORKSHOP FOR INDUSTRIALIZING COUNTRIES PROGRAMME
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IEC TC 59: Performance of household and similar electrical appliances

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Methods for assessing **Performance** of household and commercial electrical appliances

Associated aspects related to the use of the appliances such as:

- classification
- accessibility and usability
- ergonomic characteristics
- information provided at the point of sale

are also considered
Performance includes different criteria which are important for the user! E.g. in SC 59 K

- Noise
- Accessibility/Design for All
- Energy/Standby/Low power modes
- Applicability of cookware
- Measurement procedures for volume etc.
- Cleaning
- Measurements to assess properties
- Testing dishes for assessing preparation quality
TC 59 - Members

- **P Members**
  - Australia, Brazil, China, Denmark, Finland, France, Germany, Italy, Japan, Korea, Malaysia, Mexico, Netherlands, New Zealand, Norway, Russian Federation, Spain, Sri Lanka, Sweden, Turkey, United Kingdom, United States of America

- **O Members**
  - Austria, Belgium, Bulgaria, Canada, Czech Republic, Greece, Hungary, India, Indonesia, Iran, Ireland, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, South Africa, Switzerland, Thailand, Ukraine
Published Standards
- IEC 60436 (2004-02)

Main running Activities
- New version of IEC 60436 Ed. 4
- Revision of small bowl specification
- Inclusion of standby power
- Use of the new microwave oven in IEC 60436/A1
Published Standards

- Blankets – IEC 60299:1994-01 Ed. 2.0
- Storage Water-Heaters – IEC 60379:1987-09 Ed. 3.0
- Thermal Storage Room Heaters – IEC 60531:1999-01 Ed. 2.0
- Direct-Acting Room Heaters – IEC 60675:1998-11 Ed. 2.1
- Heating Pads – IEC 61255:1994-07 Ed. 1.0
Activity - "Future Work":

- Consider smart metering with regard to energy consumption
- Important evolutions of equipments require evolutions of respective standards
- Introduce different levels of drift and amplitude for direct acting heaters
- New test for maximum possible setting of room thermostats in IEC 60675
- Information for users with regard to different heater design targets
Published Standards

- IEC 60456 Ed.5 (performance of washing machines)
- IEC 61121 Ed.3 (performance of tumble dryers)
- IEC 60734 Ed.3 (hard water for testing)
- IEC TR 62617 Ed.1 (uncertainty in measurement)
Approach towards Global Acceptance of IS

- Proactive approach to get feedback regarding issues in the current Edition of IS as well as proposed changes in the next (and even further) Edition(s) to improve the global acceptance.

- WG and sWGs with global participation of national experts, formed to research and address proposed changes.

- Structures Team within MTs (standard Maintenance Teams) with North American, European, Asian and Australian representation to guide the changes.

- Leverage the research and testing work spread within EU, USA, Japan, Korean and Chinese manufacturer Associations.
Guiding principles for new Edition of IS under SC59D

Two key elements:

- Global acceptance and application of the new standard Edition
- No serious adverse transitional impact to current users of the Standard
Example: Revision of IEC 60456

SC 59D WGs have been undertaking development work for improvement since then:
- WG13 Test materials
- WG17 Global application of test methods
- WG18 Uncertainty assessment of performance and consumption measurement
- WG19 Reference machines and programmes
- WG20 Methods for rinsing-efficiency for household washing machines

Edition 5: was published in October 2005, now addressing all washing machine platforms

Edition 6: work in progress, to address still open issues and new challenges
Connection between IEC and EU standards
Vienna and Dresden agreements

International Electrotechnical Commission

IEC 60456

European Committee for Electrotechnical Standardization

EN 60456
Local application IS: connection between IEC standards and EU policy measures

- Ecodesign/Label
- EU Regulations
- EN 60456
- IEC 60456
Published Standards

- IEC 60312-1 (2010-09) Ed. 1.0 Vacuum cleaners for household use - Part 1: Dry vacuum cleaners - Methods for measuring the performance
- IEC 60312-2 (2010-09) Ed. 1.0 Vacuum cleaners for household use - Part 2: Wet cleaning appliances - Methods of measuring the performance
- IEC/PAS 62611 (2009-07) Ed. 1.0 Vacuum cleaners for commercial use - Methods for measuring performance
Current work program of SC 59F

WG 3 Maintenance of IEC 60312-1, by considering e.g.:
- Total dust emission
- Battery operated cleaner
- Debris pick up

WG 4 Updating of IEC 60312-2 and in particular:
- Wet cleaning of carpets
- Liquid capacity
- Drying time

WG 5 Elaborating a performance standard for cleaning robots

WG 6 Updating IEC/PAS 82611 and elaboration of standards for:
- High-pressure cleaners
- Other commercial floor treatment machines
Snapshot of 59F

- Just published (2010)
  - IEC 60312-1 by WG3
  - IEC 60312-2 by WG4
- 1st CD on cleaning robots by WG5
- Updating IEC PAS 62611 by WG6
- Preparatory work on high-pressure cleaners and other commercial floor treatment machines
Published Standards

- IEC 60350 (2009-04) - Cooking ranges, hobs, ovens and grills
- IEC 60705 (2010-04) - Microwave ovens
- IEC 61591 (2005-11) - Range hoods
- IEC/TS 61902 (1998-09) - Visual clarity of see-through oven doors of microwave ovens
Planning for the future

- Focus on harmonized measurement methods for assessing the efficiency respectively the energy consumption of cooking appliances

- Energy consumption during the active mode, during relevant low power modes and standby losses are relevant.

- These methods can be the basic for regional different Energy regulation issues.

- Basic to discuss further energy issues like smart grid, power management etc.
Published Standards

- IEC 60311 - Electric irons
- IEC 60442 - Electric toasters
- IEC 60496 - Electric warming plates
- IEC 60508 - Electric ironing machines
- IEC 60530 - Electric kettles and jugs
- IEC 60619 - Electrically operated food preparation appliances
- IEC 60661 - Electric household coffee makers
- IEC 61309 - Deep-fat fryers for household use
- IEC 61817 - Household portable appliances for cooking, grilling and similar use
Activity - Future Work:

- New standard for slicers
- Accessibility
- Maintenance of all other standards
- Determination of mass of a shot of steam
- Declaration of the steaming rate
- Ironing Efficiency
SC 59M – The new edition of IEC 62552: a family of standards is under preparation

- IEC 62552-1, Definition and General conditions for testing:
  - Definitions
  - General test conditions

- IEC 62552-2, Volume and Energy:
  - Determination of linear dimensions, volumes and areas
  - Energy consumption test

- IEC 62552-3
  - All the rest: e.g. Testing air-tightness of doors, lids or drawer seals, Testing opening force of doors or lids, Testing the durability of doors, lids and drawers, Testing mechanical strength of shelves and similar components, Testing storage temperatures, Temperature rise test, Freezing test, Ice-making test, Cooling test (not existing today)
SC 59 M - Timeline to release a standard in 2012

- First Working Document ready by February 2010  
  Two months for comments
- If needed, a WG meeting in May 2010  
  Otherwise, agree by correspondence on improvements to the text
- Second edition of a Working Document by September 2010  
  Consolidation of comments at WG/SC meeting October 2010, Seattle
- Release of first CD immediately afterwards.
- Three months for comments, ending February 2011
- A WG meeting around April 2011 to consolidate comments and propose to SC to go ahead with a CDV
- If so, after five months we may consolidate comments
- By end 2011 it should be possible to release an FDIS.

It depends on Seattle meeting
TC 59 - Maintenance teams and Working Groups

- AG 14 - Chairman's Advisory Group (CAG)
- WG 2 - Acoustical noise of household appliances
- WG 11 - Accessibility and Usability
- MT 8 - Hairdryers
- MT 9 - Household electrical appliances - Measurement of standby power
- AHG 1 - Panel Testing
- AHG 2 - Reproducibility
,, ... on how to take into account the needs of older persons and persons with disabilities ... “ in standardization

First document (“toaster example”) circulated in March 2010
“Guidance Document for the application of ISO/TR 22411 to IEC 60442, Electric toasters for household and similar use
Methods for evaluation of accessibility”
IEC TC59/ WG11
Accessibility and usability of household electrical appliances

Scope of IEC TC59/ WG11:

“Develop guidelines for the application of the ISO/IEC Guide 71 and ISO TR22411 to electrical household appliances to address the needs of older persons and persons with disabilities. The guidelines should give methods to measure and to judge the accessibility of products. When ISO-activities are further advanced the group will also consider usability. Overlap with safety requirements shall be avoided!”

10 Meetings between 2006 – 2009 !!
The activity of WG11

ISO/TR 22411
For the design fields and human abilities addressed in Guide 71

ISO/IEC Guide 71

Products, services and environments

Figure 1 — ISO/TR 22411 in relation to ISO/IEC Guide 71 and individual standards

Providing techniques of accessible design for products, services and environments, and ergonomic knowledge and data on human abilities.
Ad hoc group on standby formed by IEC TC59 at the Kyoto meeting in October 1999

TC59 in Oct 2001 found that there was much standby activity, a test method was needed

TC59 formed WG9 in 2001

Edition 1 developed and published in June 2005

Standard used extensively world wide – Europe, Australia, Korea, Energy Star, USA, Canada

WG9 became MT9 in 2005
Overview of IEC 62301

- Specifies ambient temperature and conditions, electricity supply quality and power instrumentation, mode stability
- Provides measurement methodology including various product configurations
- Reporting requirements
- Gives guidance on a range of measurement issues including instrumentation
Final Draft International Standard (FDIS) is expected in October 2010

IEC62301 Edition 2 will deliver an improved test method for measurement of standby power

It also provides substantial guidance on modes and functions and improves understanding of the operation of many common products

It is hoped that Edition 2 will be published in early 2011
TC 59 – The future challenges

- To widen the participation of National Committees, to include new P members
- Global Standards accepted by everyone everywhere
- Smart Grids/Smart metering
- Home appliances interworking
- Accessibility and Usability
Thank you for your attention

Any Question??

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