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| Reported by (Name): | Geoffrey S. Ibbott, Ph.D. |
| Organization:  | International Electrotechnical Commission |
| Position Title: | Chairman, Subcommittee 62C, Convenor, Working Group 1, Chair, US TAG |
| Activity: | Meeting of WG1, Subcommittee 62C, and Technical Committee 62 |
| Meeting Dates: | November 21-26, 2014 |
| Meeting Location: | New Orleans, LA |
| Payment $: | Reimbursement for expenses |
| Reasons for Attending or not Attending | Attended as Convenor of Working Group 1 and Chair of Subcommittee 62C |
| Issues from Previous Meetings or Year: | See report |
| General Description of Activities of the Organization and/or Meeting: | See report |
| Issues for AAPM: | See report |
| Budget Request ($): | See budget request |

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##### INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TECHNICAL COMMITTEE No. 62: ELECTRICAL EQUIPMENT IN MEDICAL PRACTICE**

**SUBCOMMITTEE No. 62C: EQUIPMENT FOR RADIOTHERAPY,**

**NUCLEAR MEDICINE AND RADIATION DOSIMETRY**

**Report to Technical Committee 62 (Agenda item 10)**

**Review of the Scope of SC62C**

SC62C will discuss at its next SC plenary meeting in New Orleans a revised scope to align its scope with the recent change to the TC62 Scope.

**Meetings**

IEC/SC 62C last met on 2013-04-13 in Shanghai.

The working groups of SC62C had the following meetings since the previous TC62 meeting:

 Working Group 1 in Houston, US, from 2013-11-06 until 2013-11-08 (62C/586/INF), and in London, UK, from 2014-03-26 until 2014-03-28 (62C/589/INF)

 Working Group 2 met in Chicago, US from 2013-05-22 until 2013-05-25
 and in Frankfurt, DE from 2014-05-12 until 2014-05-14 (62C/597/INF)

 Working Group 3 met in Freiburg, DE, from 2013-06-06 until 2013-06-07 and in Austin, US from
 2014-08-24 until 2014-08-25

**News from the Working Groups**

**Working Group 1**

Please see chapter on project updates and new projects.

**Working Group 2**

It needs to be mentioned that the number of active participants is constantly decreasing. National Committees are encouraged to delegate experts in Nuclear Medicine to SC62C/WG2.

**Working Group 3**

Dr. Ludwig Büermann, DE, was appointed as new convenor of WG3. All officers and experts thanked Dr. Hans-Joachim Selbach for his work as convenor for more than a decade assuring that the dosimetry standards always reflected the state of the art.

**Standards published since the last TC62 Meeting**

 IEC 61675-1, ed. 2.0

 Radionuclide imaging devices - Characteristics and test conditions - Part 1: Positron emission tomographs

 IEC 60601-2-17, Ed. 3.0:

 Medical electrical equipment - Part 2-17: Particular requirements for the basic safety and essential performance of automatically-controlled brachytherapy afterloading equipment

 IEC 60601-2-64, Ed. 1.0.

 Medical electrical equipment - Part 2-64: Particular requirements for the basic safety and essential performance of medical light ion accelerators in the range 10 MeV/n to 500 MeV/n

 IEC 60601-2-68, Ed. 1.0

 Medical electrical equipment - Part 2-68:
 Particular requirements for basic safety and essential performance of
 X-ray Based Image Guided Radiotherapy equipment for use with
 electron accelerators, light ion beam therapy equipment and radionuclide beam therapy equipment

 IEC 60601-2-1, Ed. 3.0, Amd 1

 Medical electrical equipment - Part 2-1: Particular requirements for the basic safety and essential performance of electron accelerators in the range 1 MeV to 50 MeV

**Project Updates**

 IEC62667

 Medical electrical equipment - Medical light ion beam equipment - Performance characteristics

 A 2nd CD was published and received a large number of comments so that a 3rd CD became necessary. This 3rd CD was published in time to discuss the comments during the WG1 meeting in New Orleans.

 IEC 61675-2, Ed. 2.0

 Radionuclide imaging devices - Characteristics and test conditions - Part 2: gamma cameras for planar imaging and spect imaging

 This project was advanced to CDV stage (62C/592/CDV). After completion of this project planar imaging and SPECT imaging characteristics and test conditions will be combined within this standard. It is suggested to withdraw IEC60789 after the publication of 61675-2-Ed.2.0

**New Projects**

PT62926

Medical electrical equipment - Requirements of safety and performance of complex real-time controlled radiotherapy systems for a moving target

This NP submitted by Japan was approved. PT62926 - a project team within WG1 - will perform this work (62C/588/RVN). The project team met from 201407-14 until 2014-07-16 at the IEC Central Office in Geneva, CH.

IEC 60601-2-8, Amd1, Ed. 2.0

Medical electrical equipment: Particular requirements for the basic safety and essential performance of therapeutic X-ray equipment operating in the range of 10kV to 1MV

This maintenance project was approved (62C/590/RR) and a CDV was circulated (62C/593/CDV). Comments will be resolved at the next WG1 meeting in New Orleans.

IEC 60601-2-1, Ed. 4.0

Medical electrical equipment - Part 2-1: Particular requirements for the basic safety and essential performance of electron accelerators in the range 1 MeV to 50 MeV

This maintenance project was approved. (62C/574/RR). It is intended to align the new particular standard with the latest edition of the general standard (IEC60601-1 and Amd. 1). and other related collateral standards. New technologies such as gating, tracking and IGRT and new delivery techniques like VMAT shall be considered when revising this standard. A group of experts working on this project had two meetings in the UK.

IEC 60731, Amd 1

Medical electrical equipment - Dosimeters with ionization chambers as used in radiotherapy

An amendment was approved (62C/584/RR) to add a new compliance test for requirement 6.3.1.

Equations and indices in the equations in clauses 6.3.1 j), k), l) and 6.4.1 l) will need corrections. A CDV was circulated. (62C/596A/CDV)

Respectfully submitted,

Claus Hoeppner

SEC, IEC SC 62C

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**INTERNATIONAL ELECTROTECHNICAL COMMISSION**

**TECHNICAL COMMITTEE No. 62:**

**ELECTRICAL EQUIPMENT IN MEDICAL PRACTICE**

**SUBCOMMITTEE No. 62C: EQUIPMENT FOR RADIOTHERAPY,**

**NUCLEAR MEDICINE AND RADIATION DOSIMETRY**

**Report from IEC SC 62C Working Group 1 to SC62C for the meeting in New Orleans, US on 2014-11-24 (Agenda Item 6)**

**Convenor: Geoffrey S. Ibbott, US**

**Meetings**

Since the meeting of the Subcommittee 62C Working Group 1 had meetings in

 Houston, US, from 2013-11-06 until 2013-11-08 (62C/586/INF)

 London, UK, from 2014-05-12 until 2014-05-14 (62C/589/INF

 The working group will also meet in New Orleans, US, from 2014-11-21 until 2014-11-23

**Standards published since the previous SC62C plenary meeting**

 IEC 60601-2-17, Ed. 3.0:

 Medical electrical equipment - Part 2-17: Particular requirements for the basic safety and essential performance of automatically-controlled brachytherapy afterloading equipment

 IEC 60601-2-64, Ed. 1.0.

 Medical electrical equipment - Part 2-64: Particular requirements for the basic safety and essential performance of medical light ion accelerators in the range 10 MeV/n to 500 MeV/n

 IEC 60601-2-68, Ed. 1.0

 Medical electrical equipment - Part 2-68:
 Particular requirements for basic safety and essential performance of
 X-ray Based Image Guided Radiotherapy equipment for use with
 electron accelerators, light ion beam therapy equipment and radionuclide beam therapy equipment

 IEC 60601-2-1, Ed. 3.0, Amd 1

 Medical electrical equipment - Part 2-1: Particular requirements for the basic safety and essential performance of electron accelerators in the range 1 MeV to 50 MeV

**Work in progress**

 **IEC 60601-2-1, Ed. 4**

 Medical electrical equipment: Particular requirements for the basic safety and essential performance of electron accelerators in the range 1 MeV to 50 MeV

 Project leader: H. Sethi

 This project was approved.(62C/574/RR) The team had two face to face meetings. It is moving forward as planned.

 **IEC 60601-2-8, Amd1, Ed. 2.0** Medical electrical equipment: Particular requirements for the basic safety and essential performance of therapeutic X-ray equipment operating in the range of 10kV to 1MV

Project leader: I.-L. Lamm

 This project is at CDV stage (62C/593/CDV) with CDV comments being resolved at the WG1 meeting in New Orleans.

 **IEC 62667, Ed. 1**

 Medical electrical equipment – Medical light ion beam equipment – Performance

 Characteristics

 Project leader: M. Moyers

 Stage 3CD

 The third CD was circulated with a commenting period until 2014-11-14. Comments will be resolved and future steps will be discussed at the WG1 meeting in New Orleans

 **PT 62926**

 Medical electrical equipment – Requirements of safety and performance of complex real- time controlled radiotherapy systems for a moving target

 Project Leader: H. Shirato

 This project was proposed by the NC of Japan (62C/580/NP) and accepted (62C/588/RVN). The work was allocated to a project team within WG1. This team met at the IEC Central Office in Geneva in July 2014 to discuss the first WD kindly prepared by the project leaders. It is moving forward as planned.

**Review of Stability Dates, Future Work and Tasks**

The working group proposes the following modifications to the stability dates:

IEC 60601-2-29
This standard still reflects the state of the art technology. New stability date of 2020 is proposed

IEC 60976, IEC TR 60977
 As the related particular standard 60601-2-1 does not yet have a new edition it is proposed to have a new stability date of 2020.

IEC 61168

New stability date of 2020 is proposed similar to 60601-2-29.

IEC/TR 61170

 New stability date of 2020 is proposed similar to 60601-2-29.

IEC/TR 61852

New stability date of 2020 is proposed.

IEC/TR 62266

It is suggested to withdraw this technical report.

IEC 62274
New stability date of 2020 is proposed. Maintenance shall start after the the projects 60601-2-1 Ed. 4 and PT 62926 will be at a more advanced stage. .

Respectfully submitted,

Claus Hoeppner

SEC, IEC SC62C

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**ELECTRICAL EQUIPMENT IN MEDICAL PRACTICE**

**SUBCOMMITTEE No.62C: EQUIPMENT FOR RADIOTHERAPY,**

**NUCLEAR MEDICINE AND RADIATION DOSIMETRY**

**Report from IEC SC 62C Working Group 2 to SC62C for the meeting in New Orleans, US, on 2014-11-24 (Agenda Item 7)**

**Convenor: B. Knoop, DE**

**Meetings**

Since the previous meeting of the Subcommittee 62C, Working Group 2 met in Chicago, US from 2013-05-22 until 2013-05-25 and in Frankfurt, DE from 2014-05-12 until 2014-05-14 (62C/597/INF)

**Call for Experts**

It needs to be mentioned that the number of active participants is constantly decreasing. National Committees are encouraged to delegate experts in Nuclear Medicine to SC62C/WG2

**Standards published since the previous SC62C plenary meeting**

- IEC 61675-1, ed. 2.0

 Radionuclide imaging devices - Characteristics and test conditions -
 Part 1: Positron emission tomographs

**Work in progress**

 IEC 61675-2 Ed. 2.0
 Radionuclide Imaging Devices – Characteristics and test conditions – Part 2: Gamma cameras for planar imaging and spect imaging

 Project Leader: H. Newiger

 This project was advanced to CDV stage. 62C/592/CDV.
 Its scope now combines equipment previously covered by three different standards, IEC 61675-2, IEC 60789 and IEC 61675-3. The working group therefore suggests that IEC 60789 and IEC 61675-3 will be withdrawn once this new editions will be published and would like a voting on this proposal at the next SC62C plenary meeting.

**Review of Stability Dates, Future Work and Tasks**

WG2 suggests reviewed the standards with stability dates at 2015 or earlier and suggests that maintenance shall be started on the following documents:

IEC 61303

Medical electrical equipment - Radionuclide calibrators - Particular methods for describing performance

IEC TR 61948-1

Nuclear medicine instrumentation - Routine tests - Part 1: Radiation counting systems

This standard requires a new edition.

IEC TR 61948-2

Nuclear medicine instrumentation - Routine tests - Part 2: Scintillation cameras and single photon emission computed tomography imaging

IEC TR 61948-3

Nuclear medicine instrumentation - Routine tests - Part 3: Positron emission tomographs

IEC TR 61948-4

Nuclear medicine instrumentation - Routine tests - Part 4: Radionuclide calibrators

A voting on this suggestion for maintenance shall be done at the next plenary meeting of SC62C

The working group also considered the need for a new project on cardiac cameras where a NP will be circulated in due time.

**Next Meeting**

Working group 2 will meet in Vancouver, CA from 2015-04-27 until 2015-04-29.

Respectfully submitted

Claus Hoeppner

SEC, IEC SC62C

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**NUCLEAR MEDICINE AND RADIATION DOSIMETRY**

**Report from IEC SC 62C Working Group 3 to SC62C for the meeting in New Orleans, US, 2014-11-24 (Agenda Item 8)**

**Convenor: L. Bueermann, DE**

**Meetings**

Since the previous meeting of SC62C, Working Group 3 met in Freiburg, DE, from 2013-06-06 until 2013-06-07 and in Austin, US, from 2014-08-24 until 2014-08-25

**Standards published since the previous SC62C plenary meeting**

- None

**Current Projects**

IEC 60731 Amd. 1 to Ed. 3.0

Project Leader
L. Bueerman, DE

A CDV for this project was circulated with a closing date for votes on 2014-12-05 (62C/596A/CDV)

**Next Meeting**

Working group 3 will meet in 2015-06-25 until 2015-06-26 in Stockholm, SE.

Respectfully submitted,

Claus Hoeppner

SEC. IEC SC62C

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**NUCLEAR MEDICINE AND RADIATION DOSIMETRY**

**Report from IEC SC 62C PT 62926 to SC62C for the meeting in New Orleans, US, 2014-11-24 (Agenda Item 9)**

**Project Leader: H. Shirato, JP**

This NP submitted by Japan was approved. PT62926 - a project team within WG1 - will perform this work (62C/588/RVN). The project team met from 201407-14 until 2014-07-16 at the IEC Central Office in Geneva, CH.

**Next Meeting**

PT 62926 will meet in New Orleans together with WG1 and has plans for another meeting the Hokkaido University (Sapporo, JP) in February, 2015.

Respectfully submitted,

Claus Hoeppner

SEC. IEC SC62C