



IEC TC14 Power Transformers Report to IEEE Transformers Committee Vancouver 24th October 2016



Paul Jarman, Chairman IEC TC14



Meetings and website

- **Last meeting with IEC general meeting Frankfurt 11-12th October 2016**
- **Next meeting Boston October 2016**
- **See Website WWW.IEC.CH/TC14 for a summary of projects and publications**
- **See www.electropedia.org – for a comprehensive IEC electrotechnical vocabulary reference**



Recently published

- **IEC 60076-10 Determination of Sound Levels**
 - Published March 2016
- **IEC 60076-10-1 Determination of Sound Levels – Application Guide**
 - Published March 2016



New documents in development

- **IEC 60076-20 Energy efficiency**
 - Now technical specification, draft circulated March 2016
 - Approved for publication June 2016
 - Now with IEC for publication

- **IEC 60076-57-1202 Phase Shifting Transformers**
 - FDIS complete and sent to IEC in January 2016
 - IEC editing complete but publication of FDIS held pending IEC SMB decision on alternative IEC/IEEE references



New documents in development

- **IEC 60076-22 Transformer and Reactor Fittings**
 - -1 Protective devices (alarms and trips)
 - -2-6 Cooling equipment (decided to split into fans, pumps, radiators, liquid/air and liquid/water coolers)
 - -7 Accessories and fittings
 - CDs on parts 1-4 issued comments date 7/10/16
 - Working on CD for other parts– decided to add gas relays, fans, bags, terminal boxes and valves. Electronic monitoring will be separate proposal
- **IEC TS 60076-23 DC current suppression devices**
 - New work agreed and team formed
 - First met in Boras 14th October



New documents in development

- **Voltage Regulating Distribution Transformers**
IEC 60076-24
 - Work by the IEC team has started on the project transferred from CENELEC, progressing towards first draft.



revisions in progress

- **IEC 60076-16 Transformers for wind turbines**
 - Revision with IEEE for future joint standard
 - Comments on CD received, working on CDV
 - Possible issues with IEC regarding references
- **IEC 60214-2 Tap-changers application guide**
 - Work continues on revising this to be a dual logo document, Next meeting here Thursday/Friday target 2019
- **IEC 60076-7 Loading guide for liquid immersed transformers**
 - CDV issued comments received March 2016
 - Approved with comments so working on FDIS expected November



Revisions in progress

- **IEC 61378-2 (60076-57-129) HVDC converter transformers**
 - Work continuing on joint revision with IEEE
 - CDV issued July IEC vote 100% positive few comments
 - Need IEC editors comments
- **IEC 60076-21 Step voltage regulators**
 - Joint revision in progress MT met here on Friday
 - Second CD circulated October 2016 comments due back 25th November 2016
 - Decided to keep existing IEC/IEEE numbering
- **IEC 60076-11 Dry type transformers**
 - First draft CD circulated comments due back 9th December



Revisions in progress

- **IEC 60076-4 Impulse test guide**
 - First meeting held in Frankfurt, October 2016
- **IEC 60076-5 Short Circuit capability**
 - Several meetings held, working on first draft CD
- **IEC 60076-19 Uncertainties in Loss Measurement**
 - CENELEC document circulated December 2015
 - Comments received March 2016
 - Working on CDV



New Work agreed

- **Revisions**
 - IEC 60076-2 Temperature rise
 - IEC 60076-6 Reactors
 - IEC 60076-14 Transformers using high temperature insulation
- **Ad Hoc Group**
 - Look at functional requirements of liquids for use in transformers