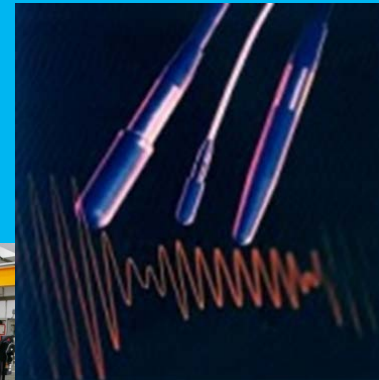
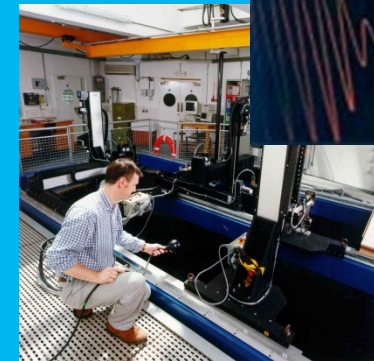


Recent developments in specification standards:

IEC TC87, ISO TC43 SC3, IEC TC29, ISO TC12

Stephen Robinson,
Bajram Zeqiri, Susan Dowson

National Physical Laboratory
CCAUV11, September 20-22, 2017



IEC TC87



Working Groups	
<u>WG 3</u>	High power transducers
<u>WG 6</u>	High Intensity Therapeutic Ultrasound (HITU) and Focusing transducers
<u>WG 7</u>	Ultrasonic surgical equipment
<u>WG 8</u>	Ultrasonic field measurement
<u>WG 9</u>	Pulse-echo diagnostic equipment
<u>WG 13</u>	Terminology
<u>WG 14</u>	Determination of ultrasound exposure parameters
<u>WG 15</u>	Underwater Acoustics

WG 3	Sam Howard (US) (new appointment)
WG 6	Thomas L Szabo (US)
WG 7	Mark Evan Schaefer (US)
WG 8	Volker Wilkens (DE)
WG 9	Paul L. Carson (US) and Peter D. Edmonds (US)
WG 13	Marvin C. Ziskin (US)
WG 14	Adam Shaw (GB)
WG 15	Stephen P. Robinson (GB)

- Last meeting of IEC/TC87: Japan in September 2016.
- Interim meetings in Vienna, June 2017.
- Next meeting: Olomouc in the Czech Republic, June 2018.

- *Work programme in written report on CCAUV web-site.*

- WG15
- IEC 60500: Properties of hydrophones – published April 2017
- IEC60050-8-1-32: International Electrotechnical Vocabulary - Part 32 (Underwater acoustics) – CD circulated in July 2017
- IEC 60565-2: Pressure calibration of hydrophones at low frequencies (CD stage passed in 2017)

ISO TC43 SC3



- ISO TC43 SC3 met at NPL, Teddington, UK in June 2016.
- Next meeting: at Woods Hole Oceanographic Institute, USA, in October 2017.
- **Recent publications:**
- ISO 17208-1:2016. Underwater acoustics — Quantities and procedures for description and measurement of underwater sound from ships; Part 1: Requirements for precision measurements in deep water used for comparison purposes
- ISO 18405:2017. Underwater Acoustics - “Terminology”
- ISO 18406:2017. Underwater acoustics — Measurement of radiated underwater sound from percussive pile driving

ISO TC43 SC3 Current work programme

Reference	Document title	Reg. date	Stage date	Publication date	Committee	Project leader
ISO/NP 20073	Standard-target method of calibrating active sonars for imaging and measuring scattering	2014-10-15	2014-10-15		ISO/TC 43/SC 3/WG 4	Foote, K.G. Dr.
ISO/DIS 17208-2	Underwater acoustics – Quantities and procedures for description and measurement of underwater noise from ships – Part 2: Determination of source levels from deep water measurements	2014-06-20	2017-08-14		ISO/TC 43/SC 3/WG 1	Wu, Wenwei Mr
ISO/NP 17208-3	Underwater acoustics – Quantities and procedures for description and measurement of underwater noise from ships – Part 3: Requirements for measurements in shallow water	2016-06-27	2016-06-27		ISO/TC 43/SC 3/WG 1	Robinson, Stephen
ISO/PWI 17208-4	Underwater acoustics – Quantities and procedures for description and measurement of underwater noise from ships – Part 4: Survey method for deep water		2016-06-27		ISO/TC 43/SC 3/WG 1	
ISO 18405:2017	Underwater acoustics – Terminology	2012-10-19	2017-04-25	2017-04-25	ISO/TC 43/SC 3/WG 2	Ainslie, M. Mr.
ISO 17208-1:2016	Underwater acoustics – Quantities and procedures for description and measurement of underwater sound from ships – Part 1: Requirements for precision measurements in deep water used for comparison purposes	2014-05-02	2016-03-21	2016-03-21	ISO/TC 43/SC 3/WG 1	Bahtiaran, M.A. Mr.
ISO/PWI 20797	Underwater acoustics – Measurement of ambient sound		2015-06-11		ISO/TC 43/SC 3	
ISO 18406:2017	Underwater acoustics – Measurement of radiated underwater sound from percussive pile driving	2012-11-02	2017-04-25	2017-04-25	ISO/TC 43/SC 3/WG 3	Robinson, Stephen
ISO/PWI 20800	Underwater acoustics – Calibration of autonomous acoustic receiver/recorder systems		2015-06-11		ISO/TC 43/SC 3	



ISO TC12



Revision of ISO 80000-8

- ISO 80000 series of standards which cover the quantities and units for various branches of science, meant to be coherent with the International System of Units
- New draft International Standard (DIS) ISO 80000-8 “Quantities and units – Part 8: Acoustics”
- The most important (and welcome) change since 2005 is the re-definition of sound pressure level (SPL) as the level of the mean-square sound pressure
 - previously it was defined as the level of the instantaneous sound pressure, which was somewhat bizarre and at variance with the usage and definitions in other standards

- The removal of the definition of “decibel” from ISO 80000-3 is a particular concern, as it leaves no ISO definition.
- ISO TC12 state that they will rely on IEC definition of the decibel

DRAFT INTERNATIONAL STANDARD
ISO/DIS 80000-8

ISO/TC 12 Secretariat: SIS
Voting begins on: Voting terminates on:
2017-07-14 2017-10-05

Quantities and units —
Part 8:
Acoustics

Grandeurs et unités —
Partie 8: Acoustique

ICS: 01.060

This document is circulated as received from the committee secretariat.

This draft is submitted to a parallel vote in ISO and in IEC.


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Reference number
ISO/DIS 80000-8:2017(E)

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IEC TC 29



- Scope: *To prepare International Standards related to instruments and methods of measurement in the field of electroacoustics*
- Meetings: *Plenary meeting at Comitato Elettrotecnico Italiano (CEI), Milan in March 2017*
- Since the last CCAUV meeting TC29 very active:
 - published 9 new or revised standards, as well as 5 amendments which were mostly related to emc testing of the various instruments
 - other documents issued for review, comment and vote, where appropriate
 - expect a further 7 documents to be published during 2018

New WG 24 just set up:

- to address use of computer based modular systems and the lack of proving compliance with the sound level meter standard, IEC 61672
- will produce a new document to ‘fill the gap’, specifically for user configurable, computerized, data acquisition and analysis systems

WG or MT number	Title
MT4	Sound level meters
WG5	Measurement microphones
WG10	Audiometric equipment
WG13	Hearing aids
MT17	Sound calibrators
MT18	EMC requirements and updates of relevant IEC/TC29 standards
WG21	Head and ear simulators
WG22	Hearing loop systems and equipment (now includes previous MT20 'Revision of IEC 60118-4, Induction loop systems')
MT23	Instruments for aircraft noise
WG24	Newly formed – Modular instrumentation for acoustic measurement

National Measurement System



The National Measurement System delivers world-class measurement science & technology through these organisations



The National Measurement System is the UK's national infrastructure of measurement Laboratories, which deliver world-class measurement science and technology through four National Measurement Institutes (NMIs): LGC, NPL the National Physical Laboratory, TUV NEL The former National Engineering Laboratory, and the National Measurement Office (NMO).

