

ANSI / ASA Standards

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Standards

- **Standard:**
 - A norm, method, procedure, or specification that establishes uniform engineering or technical criteria, processes, or practices to overcome *technical barriers*
 - *Technical Barriers* arise in inter-regional commerce due to differences among regulations developed independently/separately by local entities *OR* when different groups with large user bases come together, doing some well established thing that is mutually incompatible.

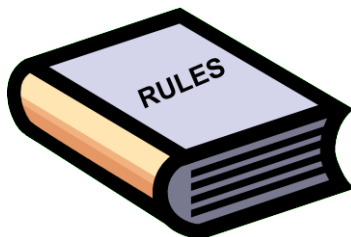
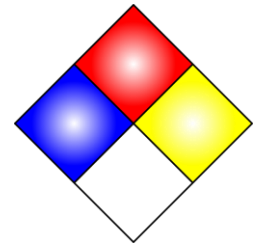
Why Standardize?

Some reasons are obvious:

- Safety
- Ensure interoperability
- Benefit from “best in class” information
- Quality Control

Some are less tangible:

- Provide basis for government regulation
- Promote product acceptance
- Facilitate entry into new markets
- Level the competitive field



Who Benefits from Standards?

- **Educators & Students**
 - Demonstrate current codes & design practices
 - References for Research
- **Manufacturers**
 - Data Interchange Compatibility
 - Quality / Process Control
 - Uniform Terminology/Vocabulary
 - Mitigate Risks of Obsolescence and/or Exclusion
- **End Users**
 - Uniform Specifications for Comparison
 - Interoperability of Products
- **Suppliers/Vendors**
 - Uniform Part & Subassembly Specifications
 - Uniform Terminology/Vocabulary
- **Government Regulatory Bodies**
 - Adoption of Existing Consensus Standards
 - Enlarge the Range of Industry Participation
- **Trade Associations**
 - Uniform Terminology/Vocabulary
 - Ensure Technical Accuracy
 - Participation in National/International Standards Process

<http://www.standardsboostbusiness.org/>

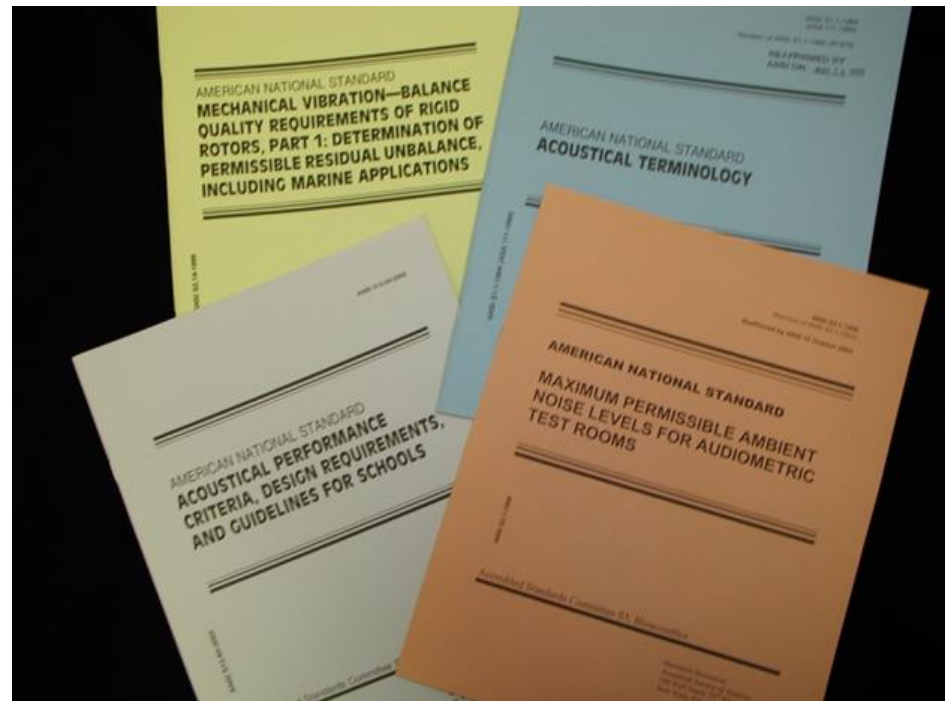
Primary Deliverables

- ANSI Approved Documents

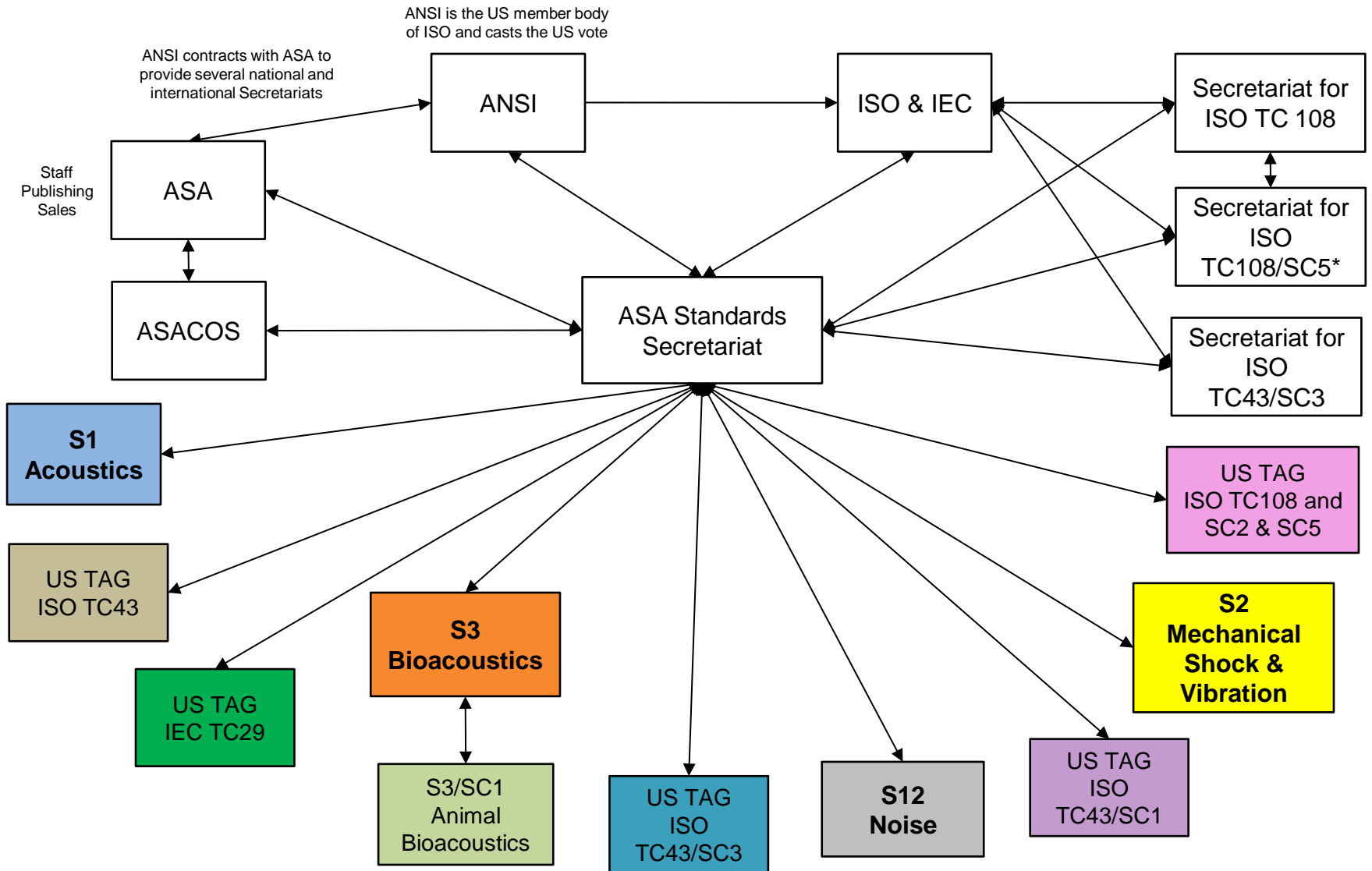
- American National Standards
- Nationally Adopted International Standards
 - ✓ Technical Reports can be registered with ANSI

- ISO/IEC Deliverables

- ISO/IEC Standards
- Technical Reports
- Technical Specifications
- Publically Available Specifications
- International Workshop Agreements



ASA Standards Program

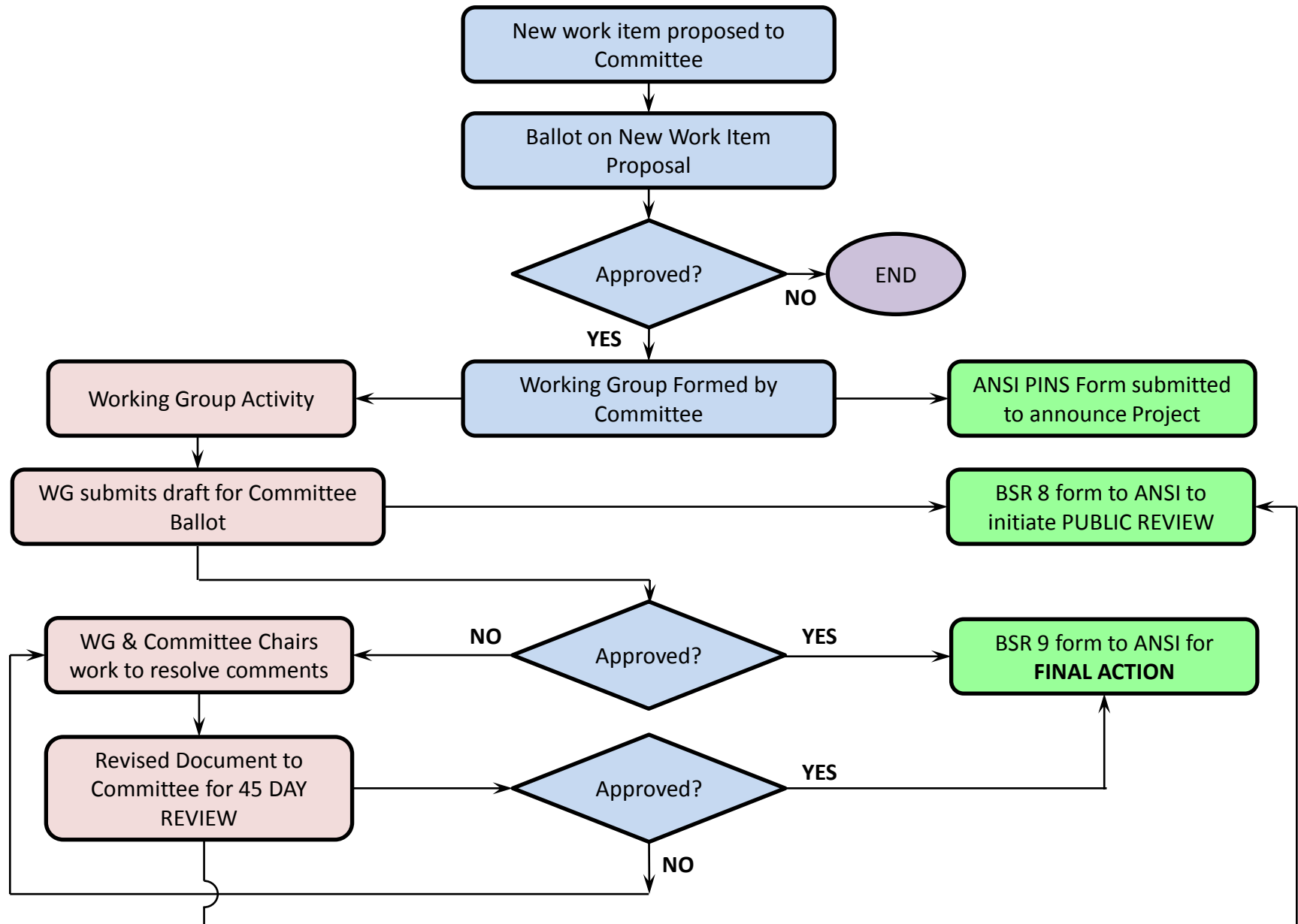


Standards Development from New Work Item Proposal through Final Approval

Working Group

Committee

ANSI



S1 – Acoustics

- Terminology
- Sound level meters
- Measurement Microphones
- Acoustical calibrators
- Filters
- Physical sound measurements
- Noise dosimeters
- Surface impedance measurement



ASC-S1 Working Groups

	ASC S1 – Acoustics
S1/WG01	Standard Microphones and their Calibration
S1/WG02	Attenuation of Sound in the Atmosphere
S1/WG04	Measurement of Sound Pressure Levels in Air
S1/WG05	Band Filter Sets
S1/WG07	Personal Noise Dosimeters
S1/WG15	Noise Canceling Microphones
S1/WG17	Sound Level Meters and Integrating Sound Level Meters
S1/WG19	Insertion Loss of Windscreens
S1/WG20	Measurement of Ground Impedance and Attenuation of Sound due to the Ground

ANSI/ASA S1 - Standards

S1.1 ACOUSTICAL TERMINOLOGY

S1.6 PREFERRED FREQUENCIES, FREQUENCY LEVELS, AND BAND NUMBERS FOR ACOUSTICAL MEASUREMENTS

S1.8 REFERENCE QUANTITIES FOR ACOUSTICAL LEVELS

S1.9 INSTRUMENTS FOR THE MEASUREMENT OF SOUND INTENSITY

S1.4 SOUND LEVEL METERS

S1.11 SPECIFICATION FOR OCTAVE-BAND AND FRACTIONAL-OCTAVE-BAND ANALOG AND DIGITAL FILTERS

S1.12 LABORATORY STANDARD MICROPHONES

S1.13 MEASUREMENT OF SOUND PRESSURE LEVELS IN AIR

S1.14 RECOMMENDATIONS FOR SPECIFYING AND TESTING THE SUSCEPTIBILITY OF ACOUSTICAL INSTRUMENTS TO RADIATED RADIO-FREQUENCY ELECTROMAGNETIC FIELDS, 25 MHZ TO 1 GHZ

S1.15 MEASUREMENT MICROPHONES

S1.16 METHOD FOR MEASURING THE PERFORMANCE OF NOISE DISCRIMINATING AND NOISE CANCELING MICROPHONES

S1.17 MICROPHONE WINDSCREENS - TEST PROCEDURES FOR MEASUREMENTS OF INSERTION LOSS IN STILL AIR

S1.18 METHOD FOR DETERMINING THE ACOUSTIC IMPEDANCE OF GROUND SURFACES

S1.20 PROCEDURES FOR CALIBRATION OF UNDERWATER ELECTROACOUSTIC TRANSDUCERS

S1.22 SCALES AND SIZES FOR FREQUENCY CHARACTERISTICS AND POLAR DIAGRAMS IN ACOUSTICS

S1.24 BUBBLE DETECTION AND CAVITATION MONITORING

S1.25 SPECIFICATION FOR PERSONAL NOISE DOSIMETERS

S1.26 METHODS FOR CALCULATION OF THE ABSORPTION OF SOUND BY THE ATMOSPHERE

S1.31 BROAD-BAND NOISE SOURCES IN REVERBERATION ROOMS

S1.40 SPECIFICATIONS AND VERIFICATION PROCEDURES FOR SOUND CALIBRATORS

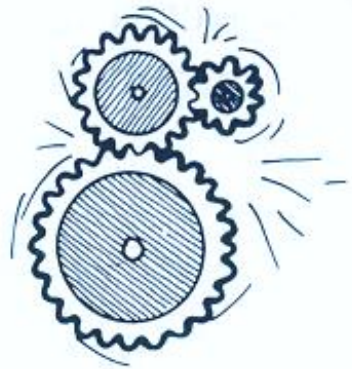
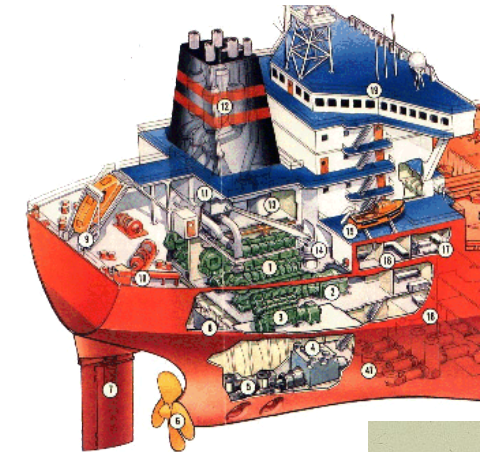
S1.42 DESIGN RESPONSE OF WEIGHTING NETWORKS FOR ACOUSTICAL MEASUREMENTS

S1.43 SPECIFICATIONS FOR INTEGRATING-AVERAGING SOUND LEVEL METERS

S2 – Mechanical Vibration and Shock



- Calibration of shock and vibration transducers
- Characteristics of resilient mounting
- Mechanical vibration of rotating machines
- Human exposure to vibration
- Ship vibration



ASC-S2 Working Groups

	ASC S2 – Mechanical Vibration and Shock
S2/WG02	Terminology and Nomenclature in the Field of Mechanical Vibration and Shock and Condition Monitoring and Diagnostics of Machines
S2/WG04	Characterization of the Dynamic Mechanical Properties of Viscoelastic Polymers
S2/WG05	Use and Calibration of Vibration and Shock Measuring Instruments
S2/WG07	Acquisition of Mechanical Vibration and Shock Measurement Data
S2/WG08	Analysis Methods of Structural Dynamics
S2/WG09	Training and Accreditation
S2/WG10	Operational Monitoring and Condition Evaluation
S2/WG11	Measurement and Evaluation of Mechanical Vibration of Vehicles
S2/WG12	Measurement and Evaluation of Structures and Structural Systems for Assessment and Condition Monitoring
S2/WG14	Prediction of Ground-Borne Noise and Vibration from Rail Transportation Systems
S2/WG15	Shaft Alignment Methodology
S2/WG16	Auxiliary Equipment for Shock and Vibration Measurements
S2/WG39	Human Exposure to Mechanical Vibration and Shock (joint with S3)
S2/WG54	Atmospheric Blast Effects

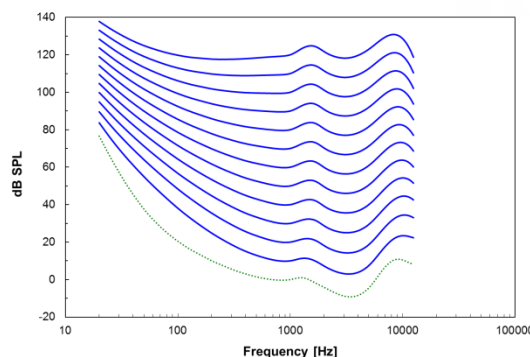
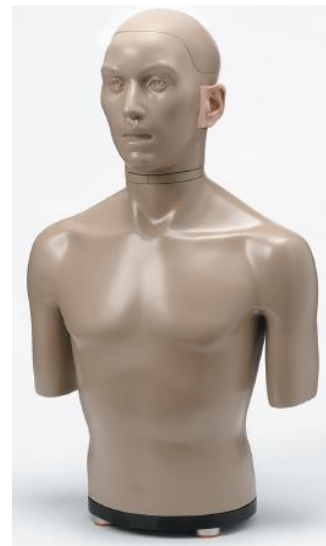
ANSI/ASA S2 – Standards

- S2.1 MECHANICAL VIBRATION, SHOCK AND CONDITION MONITORING - VOCABULARY
- S2.2 METHODS FOR THE CALIBRATION OF SHOCK AND PICKUPS
- S2.4 METHOD FOR SPECIFYING THE CHARACTERISTICS OF AUXILIARY ANALOG EQUIPMENT FOR SHOCK AND VIBRATION MEASUREMENTS
- S2.8 TECHNICAL INFORMATION USED FOR RESILIENT MOUNTING APPLICATIONS
- S2.9 PARAMETERS FOR SPECIFYING DAMPING PROPERTIES OF MATERIALS AND SYSTEM DAMPING
- S2.16 VIBRATORY NOISE MEASUREMENTS AND ACCEPTANCE CRITERIA OF SHIPBOARD EQUIPMENT
- S2.20 ESTIMATING AIRBLAST CHARACTERISTICS FOR SINGLE POINT EXPLOSIONS IN AIR, WITH A GUIDE TO EVALUATION OF ATMOSPHERIC PROPAGATION AND EFFECTS
- S2.21 METHOD FOR PREPARATION OF A STANDARD MATERIAL FOR DYNAMIC MECHANICAL MEASUREMENTS
- S2.22 RESONANCE METHOD FOR MEASURING THE DYNAMIC MECHANICAL PROPERTIES OF VISCOELASTIC MATERIALS
- S2.23 SINGLE CANTILEVER BEAM METHOD FOR MEASURING THE DYNAMIC MECHANICAL PROPERTIES OF VISCOELASTIC MATERIALS
- S2.24 GRAPHICAL PRESENTATION OF THE COMPLEX MODULUS OF VISCOELASTIC MATERIALS
- S2.25 GUIDE FOR THE MEASUREMENT, REPORTING, AND EVALUATION OF HULL AND SUPERSTRUCTURE VIBRATION IN SHIPS
- S2.26 VIBRATION TESTING REQUIREMENTS AND ACCEPTANCE CRITERIA FOR SHIPBOARD EQUIPMENT
- S2.27 GUIDELINES FOR THE MEASUREMENT AND EVALUATION OF VIBRATION OF SHIP PROPULSION MACHINERY
- S2.28 GUIDE FOR THE MEASUREMENT AND EVALUATION OF BROADBAND VIBRATION OF SURFACE SHIP AUXILIARY ROTATING MACHINE
- S2.29 GUIDE FOR THE MEASUREMENT AND EVALUATION OF VIBRATION OF MACHINE SHAFTS ON SHIPBOARD MACHINERY
- S2.31 METHODS FOR THE EXPERIMENTAL DETERMINATION OF MECHANICAL MOBILITY - PART 1: BASIC DEFINITIONS AND TRANSDUCERS
- S2.32 METHODS FOR THE EXPERIMENTAL DETERMINATION OF MECHANICAL MOBILITY - PART 2: MEASUREMENTS USING SINGLE-POINT TRANSLATIONAL EXCITATION
- S2.46 CHARACTERISTICS TO BE SPECIFIED FOR SEISMIC TRANSDUCERS
- S2.58 AUXILIARY TABLES FOR VIBRATION GENERATORS - METHODS OF DESCRIBING EQUIPMENT CHARACTERISTICS
- S2.61 GUIDE TO THE MECHANICAL MOUNTING OF ACCELEROMETERS
- S2.62 SHOCK TEST REQUIREMENTS FOR EQUIPMENT IN A RUGGED SHOCK ENVIRONMENT
- S2.70 GUIDE FOR THE MEASUREMENT AND EVALUATION OF HUMAN EXPOSURE TO VIBRATION TRANSMITTED TO THE HAND
- S2.71 GUIDE TO THE EVALUATION OF HUMAN EXPOSURE TO VIBRATION IN BUILDINGS
- S2.72 EVALUATION OF HUMAN EXPOSURE TO WHOLE-BODY VIBRATION
- S2.73 HAND-ARM VIBRATION - MEASUREMENT AND EVALUATION OF THE VIBRATION TRANSMISSIBILITY OF GLOVES AT THE PALM OF THE HAND



S3 – Bioacoustics

- Hearing aid specifications
- Audiometry
- Couplers & Manikins
- Speech Intelligibility
- Calculation of loudness levels
- Terminology



ASC-S3 Working Groups

	ASC S3 – Bioacoustics
S3/WG35	Audiometric Equipment
S3/WG36	Subjective Speech Intelligibility Testing
S3/WG37	Couplers, Ear Simulators, and Earphones
S3/WG48	Hearing Aid Measurement
S3/WG51	Auditory Magnitudes (Loudness)
S3/WG56	Criteria for Background Noise for Audiometric Testing
S3/WG58	Hearing Conservation Criteria
S3/WG62	Impulse Noise with Respect to Hearing Hazard
S3/WG67	Manikins
S3/WG72	Measurement of Auditory Evoked Potentials
S3/WG73	Bioacoustical Terminology
S3/WG79	Methods for Calculation of the Speech Intelligibility Index
S3/WG80	Probe-tube Measurements of Hearing Aid Performance
S3/WG81	Hearing Assistance Technologies
S3/WG83	Sound Field Audiometry
S3/WG84	Otoacoustic Emissions
S3/WG88	Audible Emergency Evacuation Signals
S3/WG91	Text-to-Speech Synthesis Systems

ANSI/ASA S3 - Standards

S3.1 MAXIMUM PERMISSIBLE AMBIENT NOISE LEVELS FOR AUDIOMETRIC TEST ROOMS

S3.2 METHOD FOR MEASURING THE INTELLIGIBILITY OF SPEECH OVER COMMUNICATION SYSTEMS

S3.4 PROCEDURE FOR THE COMPUTATION OF LOUDNESS OF STEADY SOUNDS

S3.5 METHODS FOR CALCULATION OF THE SPEECH INTELLIGIBILITY INDEX

S3.6 SPECIFICATION FOR AUDIOMETERS

S3.7 METHODS FOR COUPLER CALIBRATION OF EARPHONES

S3.13 MECHANICAL COUPLER FOR MEASUREMENT OF BONE VIBRATORS

S3.20 BIOACOUSTICAL TERMINOLOGY

S3.21 METHODS FOR MANUAL PURE-TONE THRESHOLD AUDIOMETRY

S3.22 SPECIFICATION OF HEARING AID CHARACTERISTICS

S3.25 STANDARD FOR AN OCCLUDED EAR SIMULATOR

S3.35 METHOD OF MEASUREMENT OF PERFORMANCE CHARACTERISTICS OF HEARING AIDS UNDER SIMULATED REAL-EAR WORKING CONDITIONS

S3.36 SPECIFICATION FOR A MANIKIN FOR SIMULATED IN-SITU AIRBORNE ACOUSTIC MEASUREMENTS

S3.37 PREFERRED EARHOOK NOZZLE THREAD FOR POSTAURICULAR HEARING AIDS

S3.39 SPECIFICATIONS FOR INSTRUMENTS TO MEASURE AURAL ACOUSTIC IMPEDANCE AND ADMITTANCE (AURAL ACOUSTIC IMMITTANCE)

S3.41 AUDIBLE EMERGENCY EVACUATION SIGNAL

S3.42, Part 1 TESTING HEARING AIDS WITH A BROAD-BAND NOISE SIGNAL

S3.42, Part 2 TESTING HEARING AIDS - PART 2: METHODS FOR CHARACTERIZING SIGNAL PROCESSING IN HEARING AIDS WITH A SPEECH-LIKE SIGNAL

S3.43 STANDARD REFERENCE ZERO FOR THE CALIBRATION OF PURE-TONE BONE-CONDUCTION AUDIOMETERS

S3.44 DETERMINATION OF OCCUPATIONAL NOISE EXPOSURE AND ESTIMATION OF NOISE-INDUCED HEARING IMPAIRMENT

S3.45 PROCEDURES FOR TESTING BASIC VESTIBULAR FUNCTION

S3.46 METHODS OF MEASUREMENT OF REAL-EAR PERFORMANCE CHARACTERISTICS OF HEARING AIDS

S3.47 SPECIFICATION OF PERFORMANCE MEASUREMENT OF HEARING ASSISTANCE DEVICES/SYSTEMS

S3.50 METHOD FOR EVALUATION OF THE INTELLIGIBILITY OF TEXT-TO-SPEECH SYNTHESIS SYSTEMS

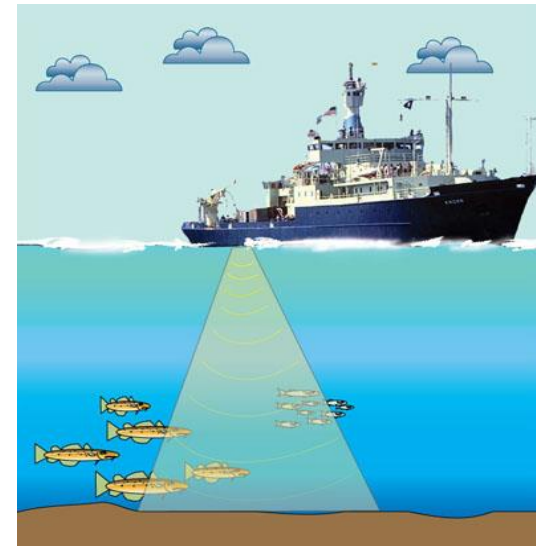
S3.55, Part 1 EAR SIMULATOR FOR THE MEASUREMENT OF SUPRA-AURAL AND CIRCUMAURAL EARPHONES

S3.55, Part 5 2cm³ COUPLER FOR THE MEASUREMENT OF HEARING AIDS AND EARPHONES COUPLED TO THE EAR BY MEANS OF EAR INSERTS

S3/SC1.4 TR SOUND EXPOSURE GUIDELINES FOR FISHES AND SEA TURTLES

S3/SC 1 – Animal Bioacoustics

- Effects of sound on animals (aquatic and terrestrial)
- Instrumentation
- Weighting
- Terminology

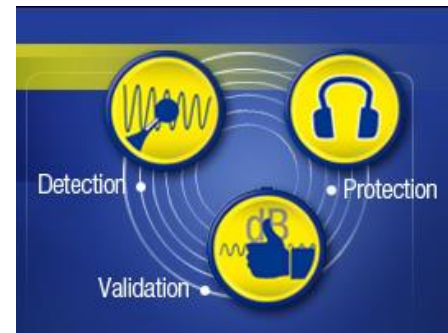
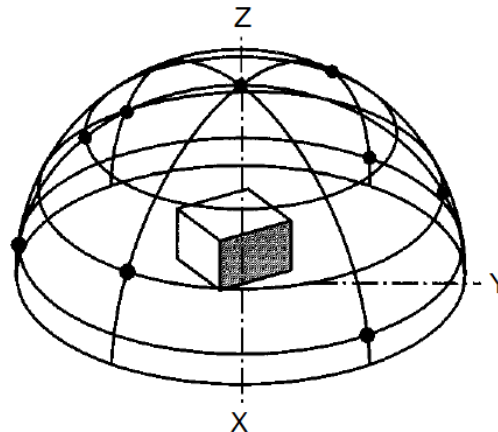


ASC-S3/SC1 Working Groups

	ASC S3/SC 1 – Animal Bioacoustics
S3/SC1 WG01	Animal Bioacoustics Terminology
S3/SC1 WG02	Effects of Sound on Fish and Turtles
S3/SC1 WG03	Underwater Passive Acoustic Monitoring for Bioacoustic Applications
S3/SC1 WG04	Description and Measurement of the Ambient Sound in Parks, Wilderness Areas, and Other Quiet and/or Pristine Areas
S3/SC1 WG05	Noise and Vibration in Animal Laboratory Facilities
S3/SC1 WG06	Evoked Potential Testing of Toothed Whale Hearing

S12 – Noise

- Environmental noise measurement and assessment
- Sound power measurement
- Hearing conservation
- Factory noise measurement
- Noise from ships



- Liaison Groups (e.g., SAE, ASTM)
 - Motor vehicles, aircraft, construction equipment, power tools

ASC-S12 Working Groups

	ASC S12 – Noise
S12/WG03	Measurement of Noise from Information Technology and Telecommunications Equipment
S12/WG11	Hearing Protector Attenuation and Performance
S12/WG15	Measurement and Evaluation of Outdoor Community Noise
S12/WG18	Criteria for Room Noise
S12/WG23	Determination of Sound Power
S12/WG31	Predicting Sound Pressure Levels Outdoors
S12/WG32	Methods for Measurement of Impulse Noise
S12/WG38	Noise Labeling In Products
S12/WG40	Measurement of the Noise Aboard Ships
S12/WG41	Model Community Noise Ordinances
S12/WG44	Speech Privacy
S12/WG45	Measurement of Occupational Noise Exposure from Telephone Equipment
S12/WG47	Underwater Noise Measurements of Ships
S12/WG49	Noise from hand-operated power tools, excluding pneumatic tools
S12/WG50	Information Technology (IT) Equipment in Classrooms
S12/WG51	Procedure for Measuring the Ambient Noise Level in a Room
S12/WG52	Classroom Acoustics
S12/WG53	High Performance Aircraft Noise Measurement
S12/WG54	Measurement of Low Frequency Sound
S12/WG55	Guidelines for the Specification of Noise Emission of Machinery
S12/WG56	Assessing Visitor Response to Noise at Parks
S12/L1	Noise Emitted by Rotating Electrical Machines (liaison to ISO/TC 43/SC1/WG13)
S12/L2	Measurement of Noise from Pneumatic Compressors Tools and Machines (liaison to ISO/TC 43/SC1/WG9)
S12/L3	Measurement and Evaluation of Motor Vehicle Noise (liaison to ISO/TC 43/SC1/WG8)
S12/L4	Measurement and Evaluation of Aircraft Noise (liaison to SAE Committee A-21)
S12/L5	Environmental Acoustics (liaison to ASTM E-33)
S12/L6	Construction-Agricultural Sound Level (liaison to SAE)
S12/L7	Specialized Vehicle and Equipment Sound Level (liaison to SAE)
S12/L8	Measurement of Industrial Sound (liaison to ASME PTC 36)

ANSI/ASA S12 - Standards

- S12.1 GUIDELINES FOR THE PREPARATION OF STANDARD PROCEDURES TO DETERMINE THE NOISE EMISSION FROM SOURCES
- S12.2 CRITERIA FOR EVALUATING ROOM NOISE
- S12.3 STATISTICAL METHODS FOR DETERMINING AND VERIFYING STATED NOISE EMISSION VALUES OF MACHINERY AND EQUIPMENT
- S12.4 METHOD FOR ASSESSMENT OF HIGH-ENERGY IMPULSIVE SOUNDS WITH RESPECT TO RESIDENTIAL COMMUNITIES
- S12.5 REQUIREMENTS FOR THE PERFORMANCE AND CALIBRATION OF REFERENCE SOUND SOURCES USED FOR THE DETERMINATION OF SOUND POWER LEVELS
- S12.6 METHODS FOR THE MEASURING THE REAL-EAR ATTENUATION OF HEARING PROTECTORS
- S12.7 METHODS FOR MEASUREMENT OF IMPULSE NOISE
- S12.8 METHODS FOR DETERMINING THE INSERTION LOSS OF OUTDOOR NOISE BARRIERS
- S12.9 QUANTITIES AND PROCEDURES FOR DESCRIPTION AND MEASUREMENT OF ENVIRONMENTAL SOUND
- S12.10 MEASUREMENT OF AIRBORNE NOISE EMITTED BY INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS EQUIPMENT
- S12.11 MEASUREMENT OF AIRBORNE NOISE EMITTED AND STRUCTURE-BORNE VIBRATION INDUCED BY SMALL AIR-MOVING DEVICES
- S12.12 ENGINEERING METHOD FOR THE DETERMINATION OF SOUND POWER LEVELS OF NOISE SOURCES USING SOUND INTENSITY
- S12.13 EVALUATING THE EFFECTIVENESS OF HEARING CONSERVATION PROGRAMS THROUGH AUDIOMETRIC DATA BASE ANALYSIS
- S12.14 METHODS FOR THE FIELD MEASUREMENT OF THE SOUND OUTPUT OF AUDIBLE PUBLIC WARNING DEVICES INSTALLED AT FIXED LOCATIONS OUTDOORS
- S12.15 MEASUREMENT OF SOUND EMITTED FROM PORTABLE ELECTRIC POWER TOOLS, STATIONARY AND FIXED ELECTRIC POWER TOOLS AND GARDENING APPLIANCES
- S12.16 GUIDELINES FOR THE SPECIFICATION OF NOISE OF NEW MACHINERY
- S12.17 IMPULSE SOUND PROPAGATION FOR ENVIRONMENTAL NOISE ASSESSMENT
- S12.18 PROCEDURES FOR OUTDOOR MEASUREMENT OF SOUND PRESSURE LEVEL
- S12.19 MEASUREMENT OF OCCUPATIONAL NOISE EXPOSURE
- S12.23 METHOD FOR THE DESIGNATION OF SOUND POWER EMITTED BY MACHINERY AND EQUIPMENT
- S12.30 GUIDELINES FOR THE USE OF SOUND POWER STANDARDS AND FOR THE PREPARATION OF NOISE TEST CODES
- S12.31 PRECISION METHODS FOR THE DETERMINATION OF SOUND POWER LEVELS OF BROAD-BAND NOISE SOURCES IN REVERBERATION ROOMS
- S12.32 PRECISION METHODS FOR THE DETERMINATION OF SOUND POWER LEVELS OF DISCRETE-FREQUENCY AND NARROW-BAND NOISE SOURCES IN REVERBERATION ROOMS
- S12.33 METHODS FOR THE DETERMINATION OF SOUND POWER LEVELS OF NOISE SOURCES IN A SPECIAL REVERBERATION TEST ROOM
- S12.34 ENGINEERING METHODS FOR THE DETERMINATION OF SOUND POWER LEVELS OF NOISE SOURCES FOR ESSENTIALLY FREE-FIELD CONDITIONS OVER REFLECTING PLANE
- S12.35 SURVEY METHODS FOR THE DETERMINATION OF SOUND POWER LEVELS OF NOISE SOURCES

ANSI/ASA S12 – Standards, con't.

S12.40 SOUND LEVEL DESCRIPTORS FOR DETERMINATION OF COMPATIBLE LAND USE

S12.42 METHODS FOR THE MEASUREMENT OF INSERTION LOSS OF HEARING PROTECTION DEVICES IN CONTINUOUS OR IMPULSIVE NOISE USING MICROPHONE-IN-REAL-EAR OR ACOUSTIC TEST FIXTURE PROCEDURES

S12.43 METHODS FOR MEASUREMENT OF SOUND EMITTED BY MACHINERY AND EQUIPMENT AT WORKSTATIONS AND OTHER SPECIFIED POSTIONS

S12.44 METHODS FOR CALCULATION OF SOUND EMITTED BY MACHINERY AND EQUIPMENT AT WORKSTATIONS AND OTHER SPECIFIED POSTIONS FROM SOUND POWER LEVEL

S12.50 DETERMINATION OF SOUND POWER LEVERS OF NOISE SOURCES - GUIDELINES FOR THE USE OF BASIC STANDARD

S12.51 DETERMINATION OF SOUND POWER LEVELS AND SOUND ENERGY LEVELS OF NOISE SOURCES USING SOUND PRESSURE - PRECISION METHODS FOR REVERBERATION TEST ROOMS

S12.53 DETERMINATION OF SOUND POWER LEVELS AND SOUND ENERGY LEVELS OF NOISE SOURCES USING SOUND PRESSURE-ENGINEERING METHODS FOR SMALL MOVABLE SOURCES IN REVERBERANT FIELDS

S12.54 DETERMINATION OF SOUND POWER LEVELS AND SOUND ENERGY LEVELS OF NOISE SOURCES USING SOUND PRESSURE-ENGINEERING METHODS FOR AN ESSENTIALLY FREE FIELD OVER A REFLECTING PLANE

S12.55 DETERMINATION OF SOUND POWER LEVELS AND SOUND ENERGY LEVELS OF NOISE SOURCES USING SOUND PRESSURE - PRECISION METHODS FOR ANECHOIC ROOMS AND HEMI-ANECHOIC ROOMS

S12.56 DETERMINATION OF SOUND POWER LEVELS AND SOUND ENERGY LEVELS OF NOISE SOURCES USING SOUND PRESSURE - SURVEY METHOD USING AN ENVELOPING MEASUREMENT SURFACE OVER A REFLECTING PLANE

S12.57 DETERMINATION OF SOUND POWER LEVELS AND SOUND ENERGY LEVELS OF NOISE SOURCES USING SOUND PRESSURE - ENGINEERING/SURVEY METHODS FOR USE IN SITU IN A REVERBERANT ENVIRONMENT

S12.58 SOUND POWER LEVEL DETERMINATION FOR SOURCES USING A SINGLE-SOURCE POSITION

S12.60 ACOUSTICAL PERFORMANCE CRITERIA, DESIGN REQUIREMENTS, AND GUIDELINES FOR SCHOOLS

S12.62 ATTENUATION OF SOUND DURING PROPAGATION OUTDOORS

S12.64 QUANTITIES AND PROCEDURES FOR DESCRIPTION AND MEASUREMENT OF UNDERWATER SOUND FROM SHIPS

S12.65 STANDARD FOR RATING NOISE WITH RESPECT TO SPEECH INTERFERENCE

S12.67 PRE-INSTALLATION AIRBORNE SOUND MEASUREMENTS AND ACCEPTANCE CRITERIA OF SHIPBOARD EQUIPMENT

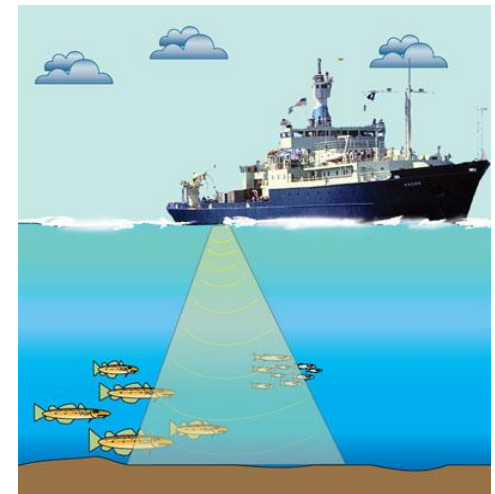
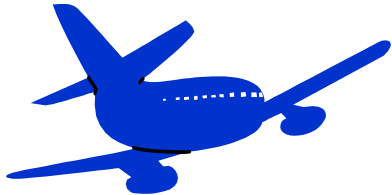
S12.68 METHODS OF ESTIMATING EFFECTIVE A-WEIGHED SOUND PRESSURE LEVELS WHEN HEARING PROTECTORS ARE WORN

S12.69 PROCEDURE FOR TESTING RAILROAD HORNS EX SITU

S12.75 METHODS FOR THE MEASUREMENT OF NOISE EMISSIONS FROM HIGH PERFORMANCE MILITARY JET AIRCRAFT

U.S. Technical Advisory Groups to ISO/IEC Committees (U.S. TAGs)

- IEC/TC29 Electroacoustics
- ISO/TC 43 Acoustics
- ISO/TC 43/SC 1 Noise
- ISO/TC 43/SC 3 Underwater acoustics
- ISO/TC 108 Mechanical vibration, shock and condition monitoring
 - SC 2 Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures
 - SC 3 Use and calibration of vibration and shock measuring instruments
 - SC 4 Human exposure to mechanical vibration and shock
 - SC 5 Condition monitoring and diagnostics of machine systems



TAGs to IEC committees operate under USNC approved procedures

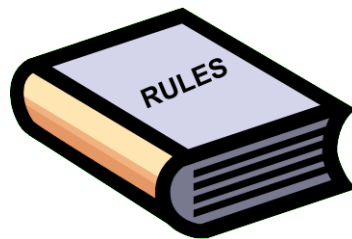
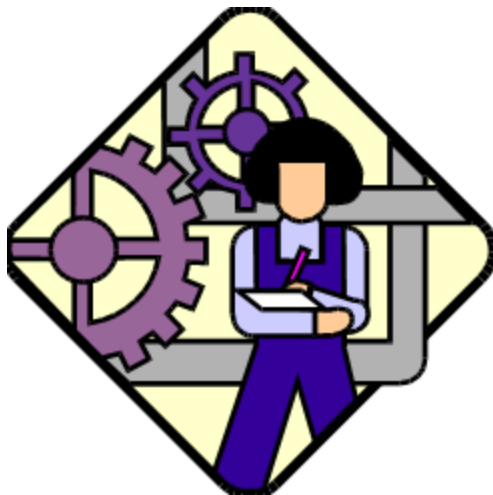
TAGs to ISO committees are accredited by ANSI

U.S. Technical Advisory Groups

- Chair (vice chair or co-chair)
- Organizational members
- Provides pool of experts who may participate in ISO/IEC working groups
- Establishes U.S. position on ISO/IEC matters *more than 80 times per year*
 - For each ISO/IEC ballot a “coordinator” is appointed
 - Comments solicited from TAG members & others
 - Coordinated comments and vote submitted through ANSI (USNC in IEC)

ISO Secretariats Administered by ASA

- ISO/TC 108 Mechanical vibration, shock and condition monitoring
- ISO/TC 108/SC 5 Condition monitoring and diagnostics of machine systems*
- ISO/TC 43/SC 3 Underwater acoustics



More Information About ASA Standards

Interactive web-based tutorials from ANSI:

- Why Standards Matter

<http://www.standardslearn.org/coursedetails.aspx?key=44>

- Through History With Standards

<http://www.standardslearn.org/coursedetails.aspx?key=60>

- The US Standards System

<http://www.standardslearn.org/coursedetails.aspx?key=2>

- Legal Issues in Standard Setting

<http://www.standardslearn.org/coursedetails.aspx?key=59>

Participate in the Standards Process

- ANSI/ASA welcomes participation in the American National Standards Development Process. Please contact ASA Standards at asastds@acousticalsociety.org for details about Working Groups and corporate Membership in ASACOS!

