ANSI Webinar Session 1 – ASTM Activity in Cross Cutting Hydrogen Standards

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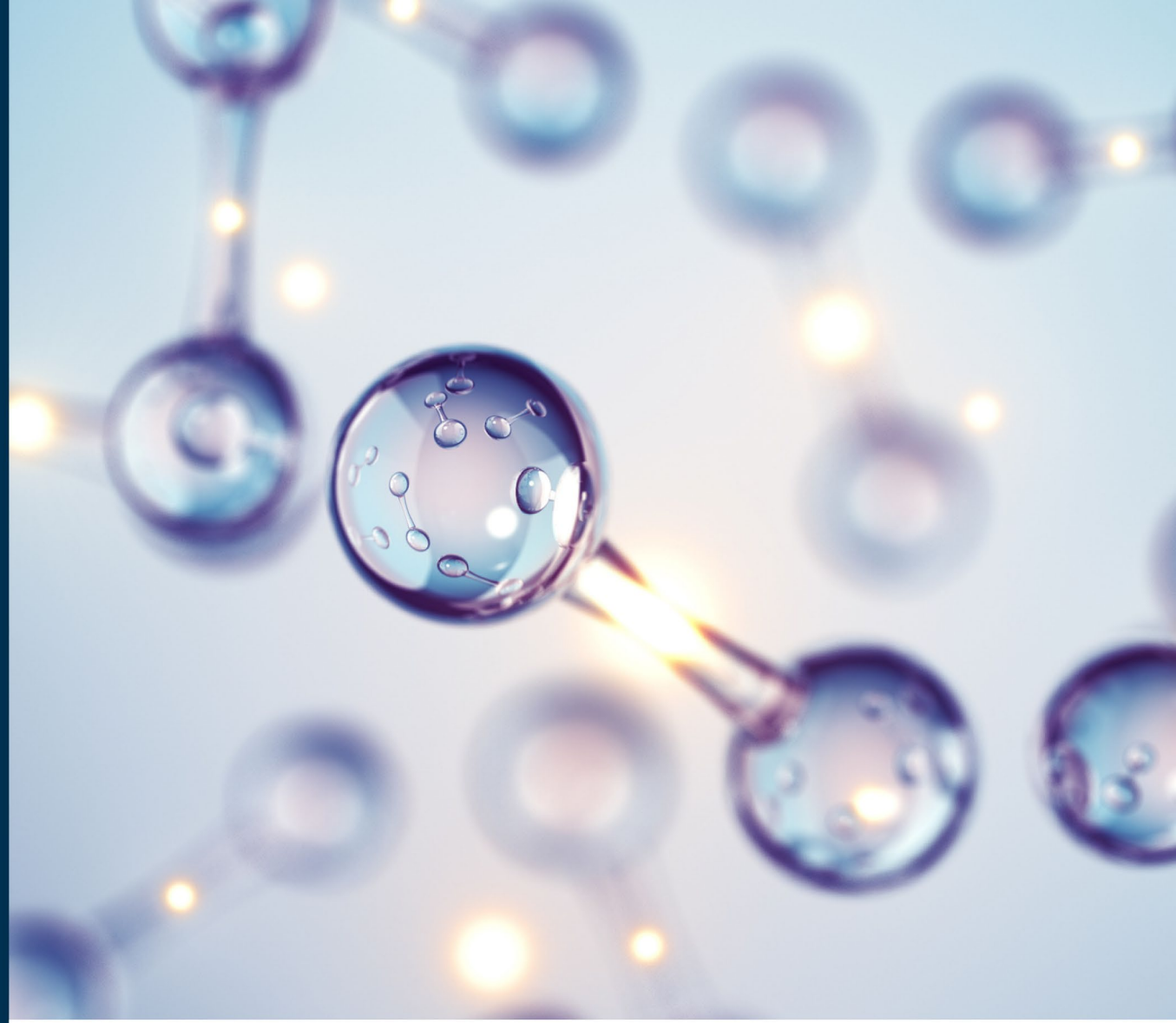


ANSI

ASTM INTERNATIONAL

CGA Compressed Gas Association The Standard For Safety Since 1913

CSA GROUP™

ASTM International at a Glance

A Proven and Practical System

–Established in 1898

–148 Committees & 13,000+ Standards

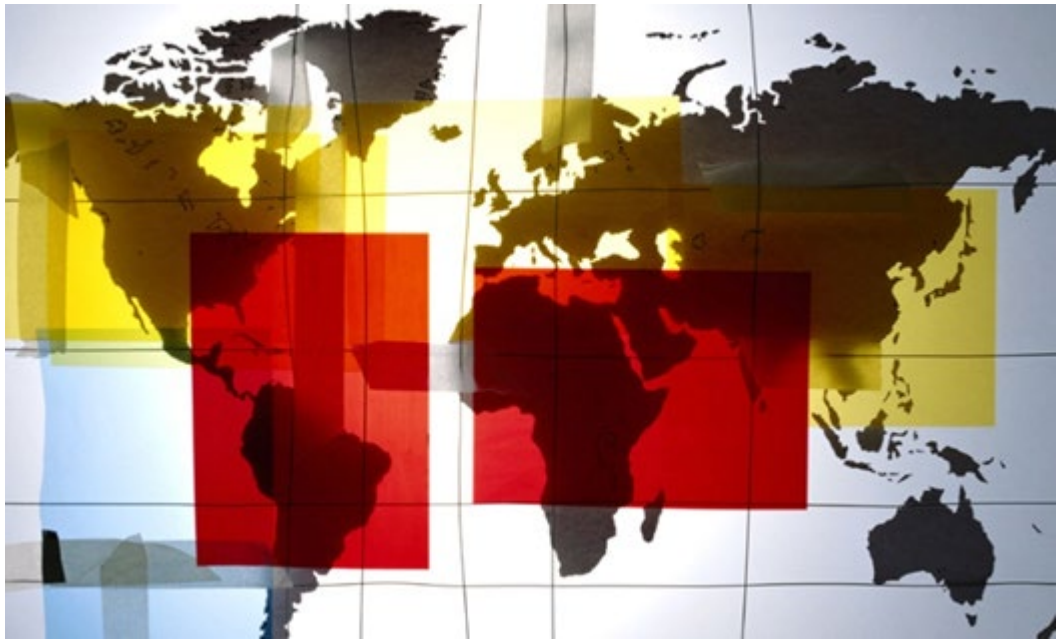
–33,000 members

–8,000+ International Members from 135 countries

–5,100 ASTM standards used in 75 countries

–Accreditation: American National Standards Institute (ANSI)

–International Standards Developer according to WTO principles: Annex 4 of WTO/TBT Agreement

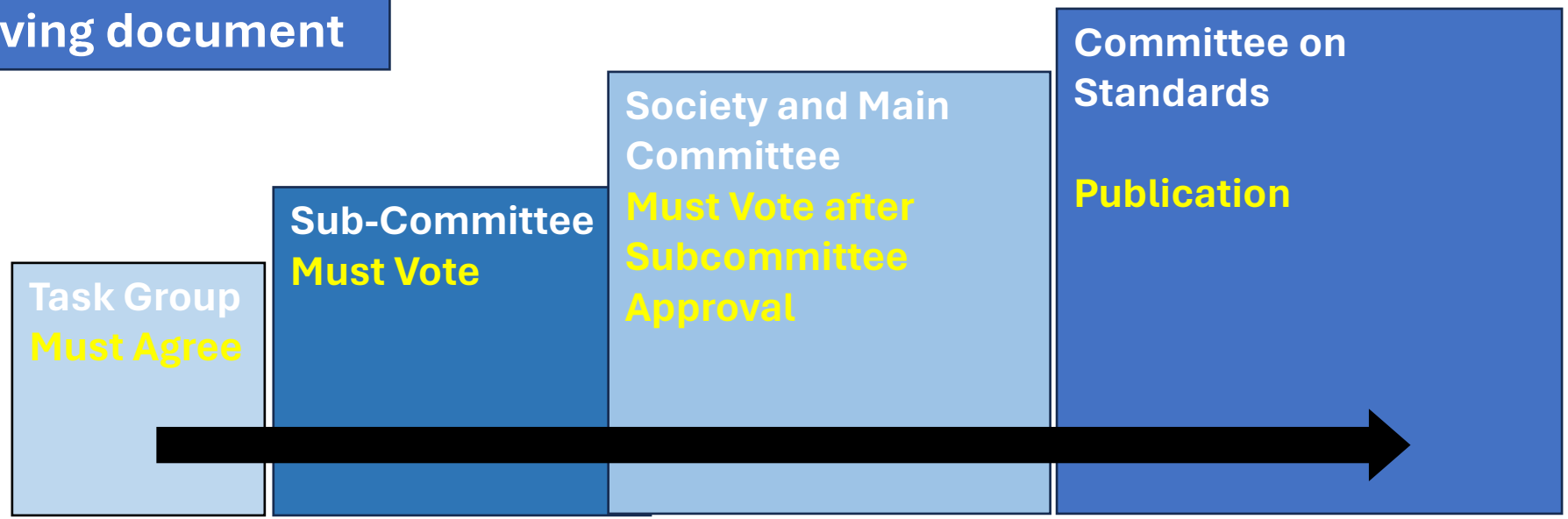


ASTM Standards Development Process

Guiding Principles

- Voluntary Consensus
- Transparency
- Balance of Interest
- Due Process
- Open Participation

Each standard is a living document



ASTM's Broad Reach related to Hydrogen

Over 20 Technical Committees have developed nearly 300 standards related to H2:

Heavy Concentration

– D02 on Petroleum Products and Lubricants

– D03 on Gaseous Fuels

– F07 on Aerospace and Aircraft

– G01 on Corrosion

Other Activities Related to H2

-D05 on Coal and Coke

-D14 on Adhesives

-D16 on Aromatic Hydrocarbons and Related Chemicals

-D22 on Sampling & Analysis of Atmospheres

-D34 on Waste Mgm't

-E41 on Laboratory Apparatus

-F16 on Fasteners

ASTM Impact Activities

Hydrogen Technologies

Activity
Committee D03
Scope
Promotes knowledge and develops standards, terminology, and testing methods for commercial gaseous fuels, including natural gas, reformulated natural gas, hydrogen, fuel-cell gases, and other misc. gaseous fuels.
Committee Makeup
225 Members, 30 Countries 12 Subcommittees

Impact

D1142 — Standard Test Method for Water Vapor Content of Gaseous Fuels by Measurement of Dew-Point Temperature

D5504 — Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence

D6228 — Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection

D7606 — Standard Practice for Sampling of High Pressure Hydrogen and Related Fuel Cell Feed Gases

D7833 — Standard Test Method for Determination of Hydrocarbons and Non-Hydrocarbon Gases in Gaseous Mixtures by Gas Chromatography

D8080 — Standard Specification for Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) Used as a Motor Vehicle Fuel

ASTM Impact Activities

Hydrogen Technologies

Activity
Proficiency Testing Program
Scope
Provides laboratories with a statistical quality assurance (SQA) tool, enabling them to compare, improve, and maintain, a high level of performance in the use of ASTM methods with other laboratories worldwide
Standard User
2,370 laboratories

Impact – Objective Testing Program

- Proficiency Testing Program (PTP): confirm and improve competence; determine method accuracy; instill the ability to judge, assess and compare test methods
- Resulting data creates statistical summary reports
- Available worldwide, they provide a level playing field, answer regulatory needs and reinforce consumer confidence
- ASTM also offers Personnel Certification Programs

ASTM Impact Activities

What's Next?

Standards in Progress

New Test Method for Standard Test Method for Permanent Gases in Hydrogen Fuel by Gas Chromatography and Pulse Discharge Helium Ionization Detector (GC/PDHID)
WK85474
This specification will aid in developing a quality specification for hydrogen fuel that can be used by the aviation industry. These specifications are being built on existing quality specifications for hydrogen fuel for ground transportation

New Specification for Aviation Hydrogen Fuels
WK85474
This specification will aid in developing a quality specification for hydrogen fuel that can be used by the aviation industry. These specifications are being built on existing quality specifications for hydrogen fuel for ground transportation

ASTM Impact Activities

What's Next?

Standardization Impact Report

The need for a strategic overview of global innovation trends and the role that standards can and do play in supporting them continues to grow. The Standardization Impact Report showcases the direct link between emerging technologies and the work of several key ASTM technical committees.

Each section provides detailed overviews of ASTM's role in a particular sector, providing the latest information you need to know about standardization activities, pertinent news, and future needs.

Learn more about Committee D03:
www.astm.org/COMMIT/D03

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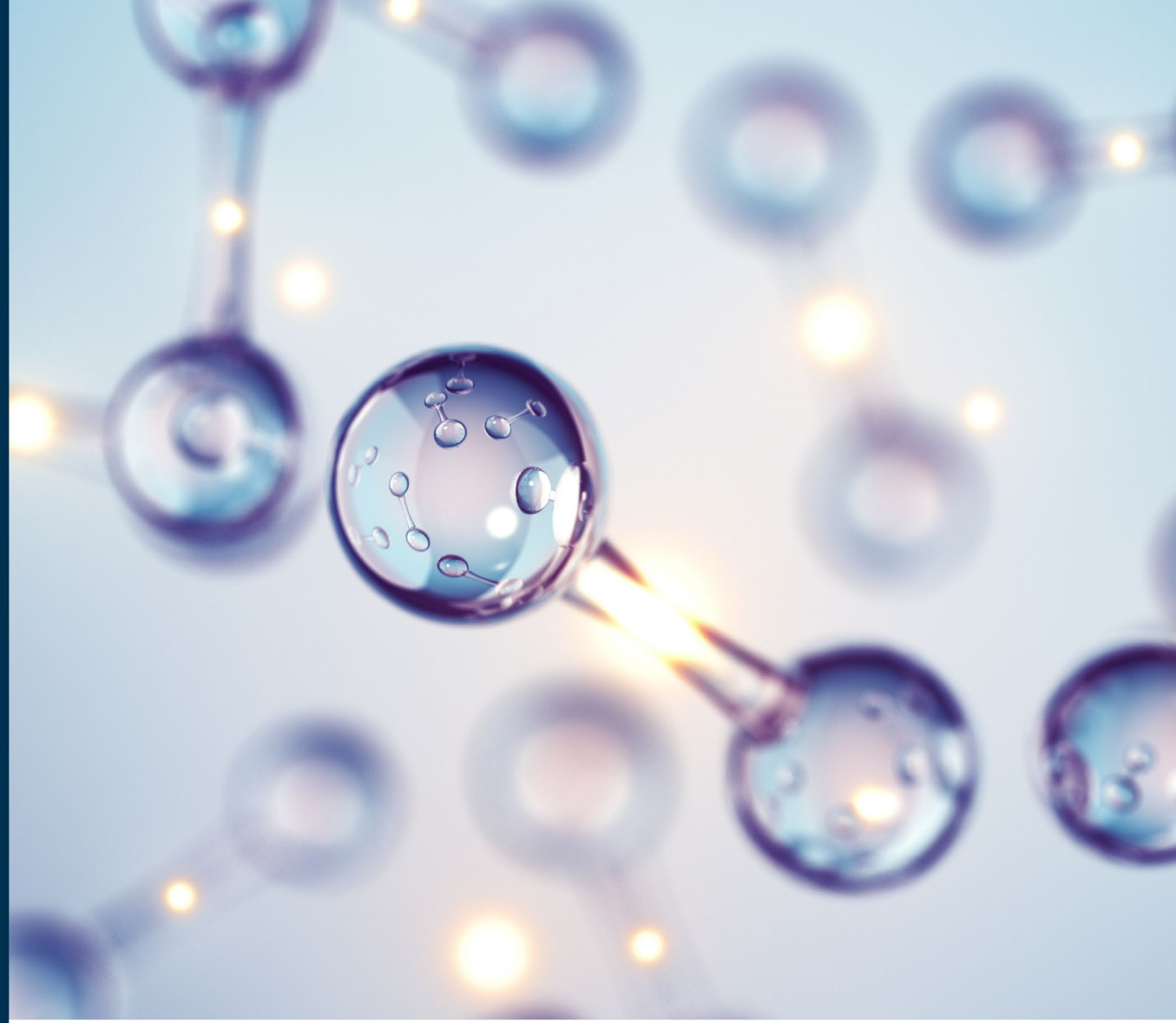

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