



ASTM International Committee D02 on Petroleum Products and Lubricants

February 2008

NBC, Orlando, FL

Presentation

- Provide an overview of ASTM International and ASTM's standardization concepts
- Introduce Committee D02 on Petroleum Products and Lubricants and Biodiesel Standards
- Provide brief overview of ASTM Standards Development Process
- Included will be specific information on participation in the process

About ASTM International

- Organized in 1898
- Independent, private sector, not-for-profit
- Provides a global forum for the development of voluntary, consensus standards and promotion of related knowledge
- Does not provide certification or accreditation



ASTM Standards are International

- ASTM embraces the principles identified in the World Trade Organization's Technical Barriers to Trade Agreement, G/TBT/REV 8 Section IX (Transparency, Relevance, Openness, Coherency, Consensus, Development Dimension)
- ASTM standards are used globally with over 3,036 adopted as either the basis of national standards or referenced in regulation by 70 countries
- ASTM standards are developed by technical experts from around the world

ASTM Serves Multiple Sectors

- Metals
- Petroleum Products and Lubricants
- Environment
 - Air, soil and water
- Construction Materials
- Consumer Products
- Rubber
- Plastics
- Road and Paving
- Medical and Surgical Materials and Devices
- Textiles
- Nanotechnology
- Pharmaceutical Process Analytical Technology

ASTM Standardization Concept

- Partnership of the public and private sector
- ASTM's standards are voluntary
 - Standards are only mandatory when cited in regulation or called out in a contract

ASTM Standardization Concept

- A balance of voting interests exists (Main & Subcommittees)
 - Applies to Official Voting Members
 - General Interest + Users + Consumers
 - Producers
 - Limits number of voting producer interests
 - Does not limit participation
 - Unofficial voting member do not count in balance



Introduction to ASTM Committee D02

on

Petroleum Products and Lubricants

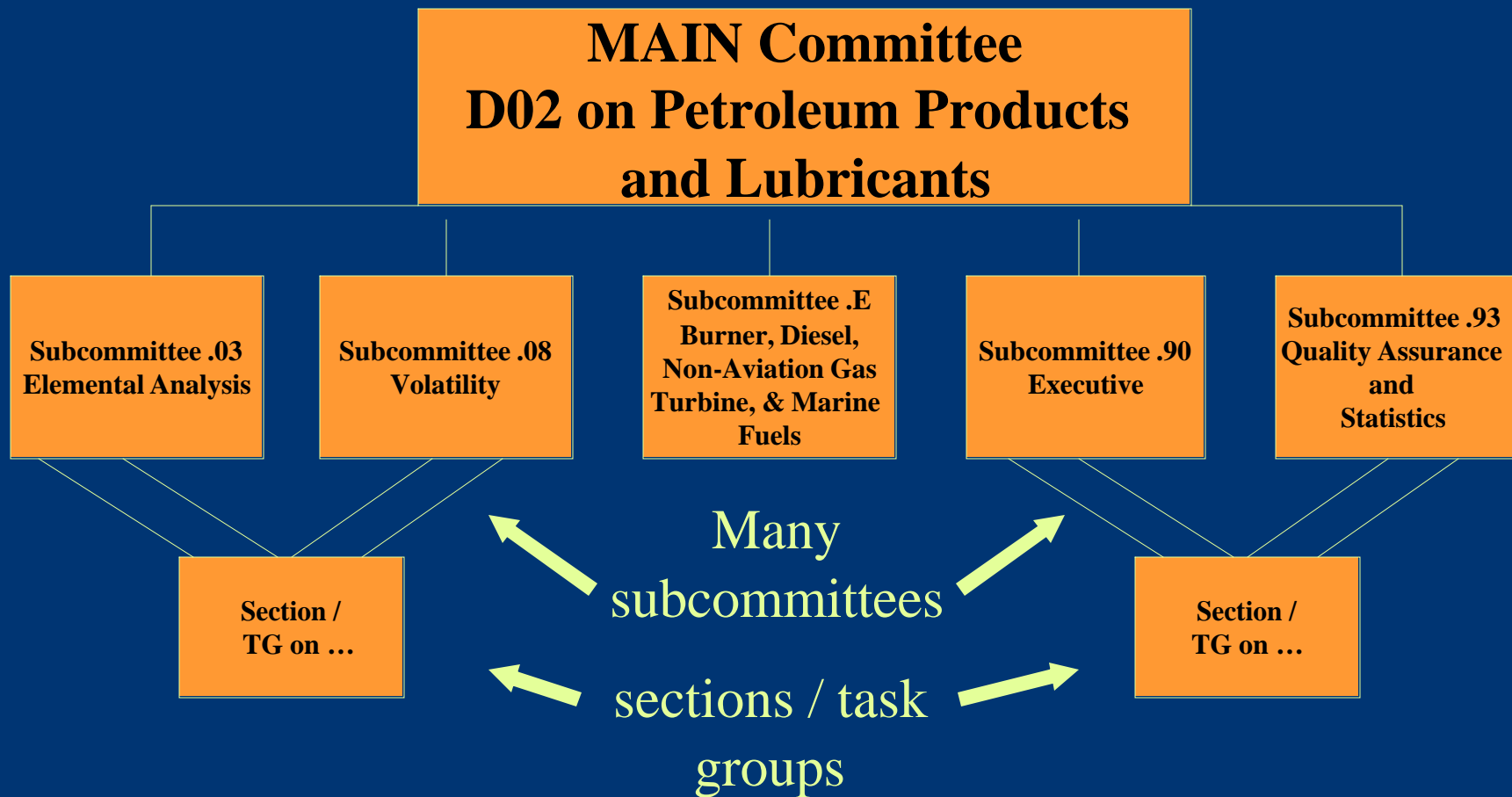
Committee D02

- Includes over 1,600 members from 52 countries
- Developer of over 700 petroleum standards that have helped to provide heat for homes, fuel for automobiles and airplanes, and lubricants for machinery
- Sponsor of numerous technical publications, laboratory quality assurance programs and technical and professional training courses, workshops, and symposia.

- **Members in D02 include representatives from:**

petroleum refineries, automobile manufacturers, engine manufactures, biodiesel producers, ethanol producers, equipment and apparatus vendors, governments, Department of Defense, academia, and others from around the world

Technical Committee Structure



Product Subcommittees

12 Product subcommittees

- Specifications
- Performance Testing

- **D02.A Gasoline and Oxygenated Fuels**
- **D02.B Automotive Lubricants**
- **D02.C Turbine Fuels**
- **D02.D Hydrocarbon for Chemical and Special Uses**
- **D02.E Burner, Diesel, Non-Aviation Gas Turbine and Marine Fuels**
- **D02.F Manufactured Carbon and Graphite Products**
- **D02.G Lubricating Greases**
- **D02.H Liquefied Petroleum Gases**
- **D02.J Aviation Fuels**
- **D02.L Industrial Lubricants**
- **D02.N Hydraulic Fluids**
- **D02.P Recycled Petroleum Products**

Properties Subcommittees

14 Properties Subcommittees

- Test Methods for Properties
- Measurements

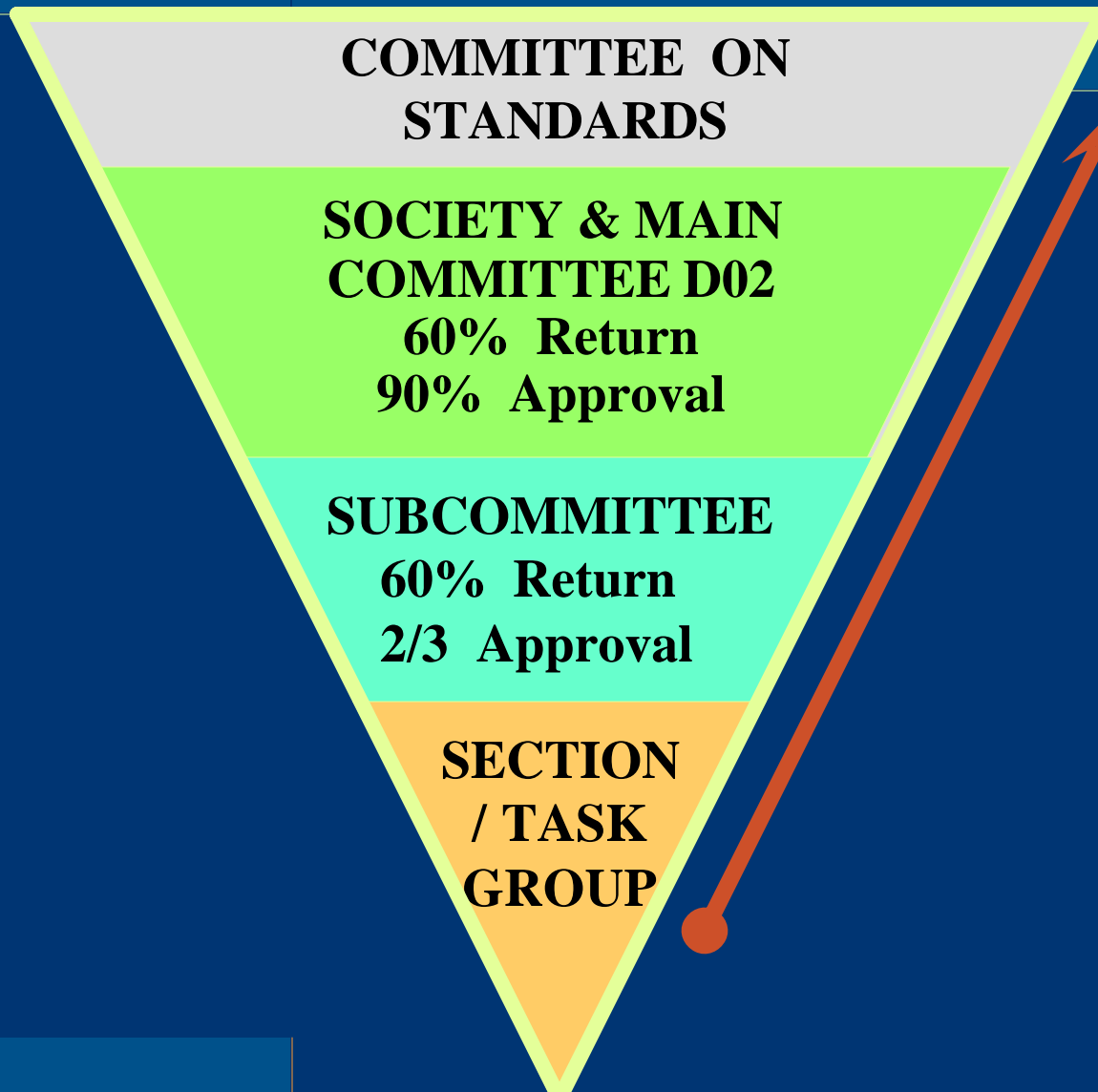
- D02.1 Combustion Characteristics
- D02.2 Static Petroleum Measurement
- D02.3 Elemental Analysis
- D02.4 Hydrocarbon Analysis
- D02.5 Properties of Fuels, Petroleum Coke and Carbon Materials
- D02.6 Analysis of Lubricants
- D02.7 Flow Properties
- D02.8 Volatility
- D02.9 Oxidation
- D02.10 Properties of Petroleum Wax
- D02.11 Engineering Science of High Performance Fluids & Solids
- D02.12 Environmental Standards for Lubricants
- D02.14 Stability and Cleanliness of Liquid Fuels
- D02.25 Performance Assessment and Validation of Process Stream Analyzer Systems for Petroleum and Petroleum Products

Coordinating Subcommittees

5 Coordinating Subcommittees

- **D02.92 Interlaboratory Crosscheck Programs**
- **D02.93 International Standards and Related Activities**
- **D02.94 Quality Assurance and Statistics**
- **D02.95 Terminology**
- **D02.96 In-Service Lubricant Testing and Condition Monitoring Services**

ASTM Balloting Process



The ASTM standards development process is driven from the bottom up, by the technical experts.

In the balloting process extensive consideration is given to negative votes. Standards are not approved until all negatives are resolved.



D02 Interlaboratory Crosscheck Program

- Provides laboratories with a statistical quality assurance tool enabling them to compare their performance in the use of ASTM test methods against other labs worldwide
 - 22 petroleum related programs such as: gear oil, aviation fuel, automatic transmission fluid, engine oil lubricants, motor gasoline, reformulated gasoline, low-sulfur diesel, **BIODIESEL**, #2 diesel, engine oil lubricants
 - Over 3000 labs participate in the petroleum related programs from more than 70 countries
 - **BIODIESEL: Approx. 100 labs; biodiesel product tested meets requirements of D6751**

Statistical Quality Assurance Testing Program - Biodiesel

- Periodic testing three times per year (April, August, December)
- Different biodiesel samples each test cycle
- Labs conduct tests, submit data, and receive back statistical summaries of all lab data (coded to maintain lab confidentiality – each lab provided their personal code in report)
- Annual fee: \$555
- More information: www.astm.org

D02 Technical and Professional Training

- Provides training on the use and implementation of ASTM standards. Conducted around the world by technical experts familiar with the ASTM standards
 - Aviation fuel
 - Gasoline
 - Marine fuel
 - Fuel and Diesel Technology
 - Crude Oil
 - **Diesel Fuel**



ASTM International Biodiesel Fuel Web Portal powered by Citation (TM)

One Stop Shopping for the Latest Biodiesel Fuel Standards

- Link directly between ASTM Standard D 6751 for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels, all 35 referenced ASTM documents, and key government documents and regulations
- Compare revisions to any document with color-coded highlights denoting changes
- Make notations directly in the standards and share your analysis online with others
- Integrate company practices and policies into the standards, preserving and passing on expertise

More info: www.astm.org Click “Books / Journals” enter “Biodiesel Portal”

One year subscription: Single User \$169. Pricing for additional users available.

Demo of a Portal product provided on-line.

International Biofuels Forum

- Government Initiative of US, EU, Brazil, S. Africa, China, India
 - ANSI and US State Department represent the US
- March 2007 Announcement at United Nations
- “Promote the sustained use and production of biofuels around the globe”
- First official activity: Tri-partite effort with technical experts from biodiesel and ethanol: US, EU, Brazil
- Work scope defined in June 2007

International Biofuels Forum Tri-Partite Task Forces

- Country standards bodies asked to supply technical experts and leaders for Task Forces:
 - USA: ASTM
 - EU: CEN
 - Brazil: ANP
- Conference calls, webinars, 2 face to face meetings to develop work product by Jan 2008

Tripartite Task Force delivered final report on January 2008

- Classified existing biodiesel specifications into three categories:

| Category A | Category B | Category C |
|---|--|--|
| Specifications that are already quite closely aligned | Significant differences between parameters and methods, but which might be aligned by work on the products, standards, and methods | Fundamental differences, perhaps due to regional regulation, which are not deemed bridgeable in the foreseeable future |

International Biofuels Forum Path Forward?

- Next steps being determined by the respective governments and their representatives
- Most likely is a more detailed cost – benefit analysis of effort to bring regional specifications more into harmony for biodiesel
- Efforts on harmonizing the test methods were seen as valuable by all and will likely continue



Asia Pacific Economic Countries (APEC) Biodiesel Standards Efforts

- ASTM has been active in biodiesel standards activities within the APEC economies:
 - Australia, Brunei Darussalam, Canada, Chile, People's Republic of China, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Chinese Taipei, Thailand, United States of America (U.S.) and Vietnam
- November 2007 conference led by US Department of Commerce and Energy. Summary of this session is on the APEC website

Committee Meetings



- Committee D02 (and its related subcommittees) usually meets twice annually, next meeting is June 15-19, 2007 in Vancouver, BC, Canada
- Many subcommittees/ task groups use virtual meetings

How can you benefit from ASTM?

- Easy access to information
- Opportunity to influence the content of standards
- Learn about the latest technology (and your competitors)
- Establish a global network



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Latest News

New ASTM President's Award/Nomination Deadline: Feb. 1



February 1 is the deadline for nominations for the new ASTM International President's Leadership Award. The award was established by the ASTM Board of Directors in 2007 to recognize extraordinary leadership within the first five years of an individual's association with ASTM International. [Download criteria for nominations.](#)

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ASTM Fire Standards and Related Technical Material: 7th Edition (Print or CD-ROM) [More](#)

New Initiatives

ASTM Ceramics Committee and American Ceramics Society to Cosponsor Workshop



ASTM International Committee C28 on Advanced Ceramics and the American Ceramic Society are cosponsoring a workshop, Needs and Opportunities for Strength and Fracture Standards at Micro and Nano Scales on Jan. 27 from 1:00 to 5:00 p.m. at the Hilton Daytona Beach Resort in Daytona Beach, Fla. The workshop will feature short and informal oral presentations about current activities and test methods under development, followed by a roundtable discussion. Topics suitable for future standardization activities will also be discussed. [More.](#)

THANK YOU!

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