STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

• TOPICS
  – ASME CODES AND STANDARDS ACTIVITIES – NONMETALLIC AREA
  – ASME VISION FOR FUTURE
  – ASME STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS – CHARTER
  – ORGANIZATION OF STANDARDS COMMITTEE
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

• TOPICS
  – ORGANIZATION OF SUBCOMMITTEES AND THEIR CHARTERS
  – ADDITIONAL ACTIONS
    • COMPOSITE PIPING SYSTEMS
    • OTHERS
  – QUESTIONS AND ANSWERS
STANDARDS COMMITTEE FOR
NONMETALLIC PRESSURE PIPING SYSTEMS

• ASME CODES AND STANDARDS ACTIVITIES IN NONMETALLIC AREA
  – ASME B31, PRESSURE PIPING CODE
    • ASME B31.1 POWER PIPING CODE
    • ASME B31.3 PROCESS PIPING CODE
    • ASME B31.8 GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS
    • ASME B31.9 BUILDING SERVICES PIPING
    • ASME B31.12 HYDROGEN PIPING AND PIPELINES
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

– ASME B31, PRESSURE PIPING CODE

• ASME B31.1 POWER PIPING CODE
  – NO DEDICATED FOCUS SUBGROUP CONSISTING OF NONMETALLIC EXPERTS

• ASME B31.3 PROCESS PIPING CODE
  – SUBGROUP ON NON-METALLIC PIPING
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

– ASME B31, PRESSURE PIPING CODE

• ASME B31.8 GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS
  – NO DEDICATED FOCUS SUBGROUP CONSISTING OF NONMETALLIC EXPERTS

• ASME B31.9 BUILDING SERVICES PIPING
  – NO DEDICATED FOCUS SUBGROUP OF NONMETALLIC EXPERTS
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

– ASME B31, PRESSURE PIPING CODE

• ASME B31.12 HYDROGEN PIPING AND PIPELINES

– CODE DOES NOT CONTAIN REQUIREMENTS FOR NONMETALLIC PIPING OR COMPONENTS.
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

– ASME BOILER AND PRESSURE CODE

• ASME SECTION II MATERIALS
  – SUBGROUP ON STRENGTH NON-METALLIC MATERIALS
  – SPECIAL WORKING GROUP ON NON-METALLIC MATERIALS

• ASME SECTION III NUCLEAR FACILITY COMPONENTS
  – SUBGROUP ON POLYETHYLENE PIPE
STANDARDS COMMITTEE
FOR
NONMETALLIC PRESSURE PIPING SYSTEMS

– ASME BOILER AND PRESSURE CODE

• ASME SECTION IV HEATING BOILERS

• ASME SECTION IX WELDING AND BRAZING QUALIFICATIONS

– SUBGROUP ON PLASTIC FUSING
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

– ASME BOILER AND PRESSURE CODE

• ASME SECTION X FIBER-REINFORCED PLASTIC PRESSURE VESSELS
  – INTERNAL DESIGN PRESSURE LIMITS VARY.
  – CLASS I VESSELS
    » 150 PSI FOR BAG-MOLDED, CENTRIFUGALLY CAST, AND CONTACT MOLDED
    » 1500 PSI FOR FILAMENT WOUND VESSELS
    » 3000 PSI FOR FILAMENT WOUND VESSELS WITH POLAR BOSS OPENING
STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS

- ASME REINFORCED THERMOSET PLASTIC (RTP) CORROSION-RESISTANT EQUIPMENT COMMITTEE
  - ASME RTP-1 APPLIES TO STATIONARY VESSELS AT PRESSURES NOT EXCEEDING 15 psig EXTERNAL AND/OR 15 psig INTERNAL ABOVE ANY HYDROSTATIC HEAD.

- ASME B16 COMMITTEE
  - UNTIL RECENTLY THERE WAS NO EFFORT TO DEVELOP STANDARD FOR NONMETALLIC VALVES
ASME VISION FOR FUTURE

• ASME STANDARDS COMMITTEE FOR NONMETALLIC PRESSURE PIPING SYSTEMS (NPPS)
  – SUBCOMMITTEE ON THERMOPLASTIC PIPING
  – SUBCOMMITTEE ON GLASS-FIBER REINFORCED THERMOSETTING RESIN PIPING
  – SUBCOMMITTEE ON NONMETALLIC MATERIALS
Consolidation of Nonmetallic Committee Activities

STDS COMMITTEE ON NONMETALLIC PRESSURE PIPING SYSTEMS

- SC on Glass Fiber-Reinforced Thermosetting Resin Piping
  - Construction Standard

- SC on Thermoplastic Piping
  - Construction Standard

- SC on Nonmetallic Materials
  - Standard Containing NM Material Specs and Design Values
Charter of Standards Committee

Development and maintenance of codes and standards for the design, manufacture, fabrication, installation, examination, testing, and inspection of thermoplastic and glass-fiber-reinforced thermosetting resin piping systems suitable for pressure applications. Also, development and maintenance of nonmetallic materials other than wood, glass, and concrete for pressure applications; and, consistent with the requirements of piping construction codes, development and maintenance of material design values and limits on the use of nonmetallic materials.
Organization Chart for Thermoplastics Piping Systems Subcommittee

Dudley Burwell
Chairman

Larry Vetter
Vice Chairman

Definitions
Mark Clark

Design
Larry Vetter

Materials
Matt Golliet

Thermoplastic components
Stands
Larry Gill

Inspection, Examination & Testing
Michael Lashley

Fabrication, Assembly & Erection
Erest Lever

Metallic Lined Thermoplastics
John Kalinins

Quality Control

Thermoplastic Fittings
Jeff Wright

Stress Intensification Factors
Tim Adams
Charter of Thermoplastic Piping Subcommittee

Establish rules relating to pressure integrity governing the construction of Thermoplastic Piping Systems. Construction, as used in this charter, is limited to materials, design, fabrication, examination, installation, inspection, testing, and certification, as required.
Organization Chart for FRP Subcommittee

Glass Fiber-Reinforced Thermosetting Resin Piping Subcommittee
Chairman – Charles Henley
Vice Chairman – Craig Moore
Secretary – Carlton Ramcharran

- Design Subgroup
  Chairman – Bruce Hebb
  Working Groups – TBD

- Material Subgroup
  Chairman – Bruce Colley
  Working Groups – TBD

- Fabrication/Examination/QA Subgroup
  Chairman – Zlatan Siveski
  Working Groups – TBD

Working Groups – TBD
Charter of FRP Subcommittee

Establish rules relating to pressure integrity governing the construction of Glass-Fiber-Reinforced Thermosetting Resin Piping Systems. Construction, as used in this charter, is limited to materials, design, fabrication, examination, installation, inspection, testing, and certification, as required.
Organization Chart
For
ASME Subcommittee Nonmetallic Materials

ASME
Subcommittee
Non-Metallic
Materials
Chair Stephen Boros
Vice Chair - ??
Secretary – Noel Lobo

SG Thermoplastic
Materials –
Chair Stephen Boros

SG Thermoset
Materials –
Chair Bruce Colley

SG Ceramic
and Graphite
– Chair ??

SG Other
Composites –
Chair ??

WG  WG  WG  WG  WG  WG  WG  WG
Charter of Nonmetallic Materials Subcommittee

Development and maintenance of material specifications for nonmetallic materials other than wood, glass, and concrete; and, consistent with the requirements ASME BPV, B31, B16, and RTP construction codes and standards, development and maintenance of material design values and limits on the use of nonmetallic materials.
Consolidation of Nonmetallic Committee Activities

STDS COMMITTEE ON NONMETALLIC POWER PIPING SYSTEMS

- SC on Glass Fiber-Reinforced Thermosetting Resin Piping
- SC on Thermoplastic Piping
- SC on Nonmetallic Materials

- Construction Standard
- Standard Containing NM Material Specs and Design Values

BPV Committee on Materials

- SG on Strength Non-Metallic Materials (Disband)
- SWG on Non-Metallic Materials (Disband)

Transfer content

BPV Section II-E (withdraw)
Consolidation of Nonmetallic Committee Activities

Names shown in Red are also members of the new SC on Nonmetallic Materials

BPV II

- Subgroup on Strength of Non-Metallic Materials (BPV II)
- Special Working Group on Non-Metallic Materials (BPV II)

ROSTER
- D. W. Rahoi Chair
- S. J. Boros, Secretary
- E. M. Focht
- M. G. Golliet
- A. N. Haddad
- B. Hauger
- J. F. Henry
- D. Keller
- P. Krishnaswamy
- E. Lever
- L. Mizell
- T. M. Musto
- Z. J. Zhou

ROSTER
- C. W. Rowley Chair
- W. I. Adams
- S. J. Boros
- F. Brown
- S. R. Frost
- M. G. Golliet
- P. S. Hill
- M. R. Kessler
- E. Lever
- L. J. Petroff
- F. Worth

ROSTER
- S. J. Boros, Chair
- W. I. Adams
- F. Brown
- B. R. Colley
- R. B. Davis
- M. G. Golliet
- A. N. Haddad
- B. Hauger
- L. T. Hutton
- D. Keller
- M. Kieba
- E. Lever
- C. A. Moore
- T. M. Musto
- C. W. Rowley
- Z. J. Zhou

BPV III

- Stds Comm on Nonmetallic PP Systems
- SC on Nonmetallic Materials
- SWG on HDPE Design of Components

ROSTER
- T. M. Adams, Chair
- T. M. Musto, Sec.
- W. I. Adams
- T. A. Bacon
- C. Basavaraju
- D. Burwell
- P. Krishnaswamy
- M. A. Martin
- E. W. McElroy
Customers for SC on Nonmetallic Materials

- RTP Committee
- B16 Committees
- B31 Committees
- Stds Comm on Nonmetallic PP Systems
- SC on Nonmetallic Materials
- SWG on HDPE Design of Components (BPV III)
- BPV III
- BPV X
- Other BPV Construction Committees: I, IV, VIII, XII
BENEFITS OF NEW ORGANIZATION

• Consolidates volunteer nonmetallic material expertise and engineering skills within 1 committee

• Avoids burdening Section II Committee with ballots on subjects with which they have little or no experience, expertise, or interest

• Avoids duplication of efforts by B31, B16, RTP, III, IV, VIII, X, XII and others: thus, increased efficiency in the standards development process and improved time-to market for committee actions

• Provides for nonmetallic technology support for a broad range of other ASME committees, analogous to the technology support provided by other committees such as BPV II, V & IX
Additional Actions

- DESIGNATIONS FOR COMMITTEES
  - NM FOR STANDARDS COMMITTEE
  - NM-1, NM-2, AND NM-3 FOR SUBCOMMITTEES

- APPROVAL OF SCOPE OF NEW CODES
  NM-1, NM-2, AND NM-3
Additional Actions

- DESIGNATIONS FOR NEW CODES
  - NM-1 THERMOPLASTIC PIPING SYSTEMS
  - NM-2 GLASS-FIBER-REINFORCED THERMOSETTING RESIN PIPING SYSTEMS
  - NM-3 NONMETALLIC MATERIALS
Additional Actions

• COMPOSITE PIPING SYSTEMS
  – CONSIDER ESTABLISHING SUBGROUPS AND WORKING WORKINGS FOR:
    • DESIGN
    • MATERIALS
    • FABRICATION AND EXAMINATION
    • INSTALLATION, TESTING, AND INSPECTION
    • QUALITY
  – NEED EXPERTS
Additional Actions

• CONTACTS:
  – Mohinder L. Nayyar
    nayyar1222@gmail.com
  – Colleen O’Brien
    obrienc@asme.org
Additional Actions

• SUMMARY
  – CURRENT STATUS OF ASME ACTIVITIES ON NONMETALLIC MATERIALS AND TECHNOLOGIES
  – FUTURE VISION OF ASME
  – NEW STANDARDS COMMITTEE
  – NEW SUBCOMMITTEES
  – CHARTERS
  – COMPOSITE PIPING
Additional Actions

• QUESTIONS AND ANSWERS