ASME Committee on Nuclear Air & Gas Treatment (CONAGT)
AG-1 Development

Thomas J. Vogan, Chair - CONAGT
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Topical Agenda

✓ History of CONAGT
✓ The Committee Organization
✓ ASME AG-1
✓ Future Activities
History of CONAGT
History of CONAGT

• May 1971 – ANSI N45.8 Committee formed to address air cleaning systems – Initiated work on the development of ANSI N509 and N510
• Jan 15, 1976 – CONAGT was accredited and chartered under the ASME Board on Nuclear Codes & Standards – Replaced ANSI N45.8 Committee
• May 6, 1976 – First CONAGT business meeting held at ASME headquarters in New York
History of CONAGT

• June 1951 – Air Cleaning Seminar for the AEC Held at Harvard University, Cambridge, MA
• Evolved into the AEC Air Cleaning Conferences
• ANSI N45.8 formed between 11th & 12th ACC with participants from the ACC.
Original Publications

- ANSI N510-1975 published June 19, 1975
- ANSI N509-1976 published December 7, 1976
- ORNL NISC-65, Air Cleaning Handbook published May 1976
The Committee Organization
ASME AG-1 Code
Organization of AG-1

- Division 1 – General Requirements
- Division 2 – Air Cleaning Equipment
- Division 3 – Gas Process Treatment Equipment
- Division 4 – Testing
Division 1 – General Requirements

- Definitions, References and Materials
- Structural Design Rules
  - Loading Criteria
  - Loading Combinations & Service Limits
  - Stress Criteria
  - Deflection Criteria
  - Component & Support Design Rules
  - Seismic Design Verification
- Inspection & Testing
- Fabrication & Coatings
- Packaging, Quality Assurance & Documentation
- Repairs, Replacements & Modifications
Division 2 – Air Cleaning Equipment

- Fans & Blowers
- Dampers & Louvers
- Ductwork
- AHU Housings
- Refrigeration Equipment
- Conditioning Equipment (Heaters & Coolers)
- Moisture Separators
- Filters
- Adsorbers & Adsorbent Media
- Mounting Frames
- Instrumentation
Division 3 – Gas Process Equipment

• Vessels
• Noble Gas Holdup
• High Pressure Blowers
• Hydrogen Recombiners
• Gas Sampling
• Scrubbers
• Cyclones
• Membranes
• Filters
• Precipitators
• Adsorbents
• Mist Eliminators
Division 4 – Air Cleaning Equipment

- Testing Air Treatment Systems
- Testing Gas Process Treatment Systems
CONAGT Challenges & Future Plans
New Code Section:
- Section FL - Sand Filters

Maintenance Revisions
- Maintenance revision of Section FJ, Low Efficiency Filters
- Maintenance revision of Section FC, HEPA Filters
- Upgrade Mandatory Appendix FC-I, HEPA Filter Media
- Incorporate design and gaskets for HEPA Filter double turned flanges
- Clarify the reference to “Nuclear Safety Related”
• Maintenance Revisions – con’t
  ✓ Consolidate and update the ASTM Material Specifications reference
  ✓ Maintenance revision of Section RA, Refrigeration Equipment
  ✓ Maintenance revision of Section CA, Conditioning Equipment
  ✓ Clarify the refrigeration equipment components quality requirements
  ✓ Incorporate rotating equipment vibration requirements into Section AA, General Requirements
  ✓ Expand and clarify the AWS welding standards for ductwork in Section AA, General Requirements
• Maintenance Revisions – con’t
  ✓ Correct the fire water spray requirements for Section FE, Type III Adsorbers
  ✓ Clarify the application of the Fluid Momentum Loads (FML) for load combinations in Section AA, General Requirements, Section DA, Ductowork and Section HA, Housings
AG-1 Code
2014 Edition

- ASME Publications - Elimination of Addenda
- 2 Year AG-1 Code Publication Cycle
- Planned New Code Sections & Appendices:
  - Section FI – Metal Media Filters
  - Section FM - High Strength HEPA Filters
  - Division 3 Code Sections
  - Portable ATS Vacuum Systems
  - Other Adsorbent Media
- Maintenance Revisions
Discussion