New Technology and Innovations in Respiratory Protection

Sean Murray
3M Construction & Home Improvement Markets Division
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Technological Breakthroughs

- **New Exhalation Valve**
  - Allows hot air to leave, decreases moisture buildup inside facepiece
  - Easier to breathe
  - Valve position on face critical to expelling hot air
  - Available on filter facepiece and elastomeric facepiece respirators
  - Increases worker comfort, safety compliance and productivity
Technological Breakthroughs

- **M Shaped Nose Clip**
  - Molds easily to face
  - Less crimping reduces pressure on bridge of nose
  - Custom and secure fit
  - Reduced potential for eyewear fogging
  - Increases worker comfort, safety compliance and productivity
Technological Breakthroughs

- **Foam Face Seal**
  - Molds easily to face
  - Soft and secure
  - Conforms to face for long lasting comfort
  - Conforms to wide range of face sizes
  - Increases worker comfort, safety compliance and productivity

- **New Filter Media**
  - Electrostatically charged filter media pull particles to the media
    - Makes breathing easier and cooler
  - Less filter media needed to achieve filter efficiencies
    - Easier to breathe with less filter resistance
  - Increases worker comfort, safety compliance and productivity
**Technological Breakthroughs**

- **Cake Resistant Filter Media**
  - Multi-layered filter traps large particles first and finer particles further inside
  - Easier breathing during longer wear time
  - Increases worker comfort, safety compliance and productivity

- **Odor Removing Filter Material**
  - Specially treated carbon removes nuisance level odors (levels below OHSA PEL)
  - Increases worker comfort, safety compliance and productivity
Technological Breakthroughs

- **Silicone facepiece**
  - Soft on face
  - Less pressure on nose
  - Reduces pressure ring/painter face on sealing surface
  - Increases worker comfort, safety compliance and productivity

- **New Filter/Cartridge combinations**
  - Polyethylene/polypropylene filter
    - Activated carbon or loaded web not possible on fiberglass
  - OV/AG nuisance level relief
  - Geared for use in mining industry
    - Aluminum smelting
    - Hydrogen fluoride
  - Multi Gas/Vapor Cartridge: NIOSH approved for chlorine, hydrogen chloride, chlorine dioxide, sulfur dioxide, and hydrogen sulfide (escape only)
New Ways to wear Powered Air Purifying Respirators (PAPRs)

- **Old OHSA rule**: chemical cartridges not to be used for isocyanates due to poor warning properties
  - PAPRs not allowed

- **Current OHSA rule made in 1998**: air monitoring determines contaminant level
  - Smell and taste no longer the standard
  - Cartridge changeout schedule required
  - PAPRs with chemical cartridges allowed
    - PAPRs increase portability
    - PAPRs increase worker comfort, safety compliance and productivity
Supplied Air Respirators

- Dual Airline provides wearer flexibility
  - Use half or full facepiece with cartridges, Type C mode, or in combination
  - Cool or heat facepiece by 50 degrees
  - Increases worker comfort, safety compliance and productivity

- Figuring out which Chemical Cartridge to use
  - Air monitoring is critical in helping you determine cartridge changeout schedule
Questions???

- If you have any questions, email me at s-murray@mmm.com