Fire Prevention and Safety

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Background

- Manufacturing and Industrial
- Billions of dollars lost each year
- Average of 37,000 fires each year
  - Heating equipment (14%)
  - Structural (20%)
  - Mechanical failure (24%)
  - 228 at refineries and natural gas plants
Common Cause #1

- Combustible Dust
  - Major cause at food, chemical and pharmaceutical manufacturing, among others
  - Combustible material comes into contact with an ignition source, causes dust to become airborne and then larger, secondary explosion.
  - If enough dust, can bring down an entire facility

Prevention

- Understand your facility and your responsibilities
- Get to know the regulations, standards and recommendations
- Select the safest industrial vacuum for your application
Common Cause #2

- Hot Work
  - Welding, torch cutting
  - 2014 California fire $100 million in damage
  - Sparks from torch cutting a metal crude oil tanks ignite vapor inside.
  - Fire spread to nearby woods.

Prevention

- Avoid hot work if possible
- Train personnel
- Ensure that the area is clear of flammable or combustible materials including dusts, liquids, and gasses
- Supervise the work
Common Cause #3 & Prevention

- Flammable liquids and gasses

Prevention
- Know the hazards
- Store flammable liquids properly
- Control all ignition sources
- Provide personal protective equipment

Common Cause #4

- Equipment and Machinery
  - Faulty Machinery and Equipment
  - Typically heating and hot work equipment
  - Friction between moving parts becomes a fire hazard
Prevention

• Safety Awareness Training
• Cleaning and housekeeping
• Maintenance

Common Cause #5

• Electrical Hazards
  • Exposed Wiring
  • Overloaded Outlets & Circuits
  • Extension Cords
  • Static Discharge
Prevention

• Don’t overload electrical equipment of circuits
• Don’t leave temporary equipment plugged in when it’s not in use
• Avoid using extension cords, and never consider them permanent solutions
• Use antistatic equipment where required by NFPA or OSHA
• Housekeeping
• Implement a reporting system

Resources