

# Facility Preparation For Heat Treatment

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# Old Myths or Half Truths

- **Heat not successful because floor level temperatures are not high enough.**
- **Cannot heat entire facility at once, so partial treatments are not successful.**

# Brief History

- **MOBILE PROGRAM - development of a basic checklist for individual modification.**
  - Learn from others.
  - Allow increased flexibility for yours.
- **No two heat treatments are alike.**
  - Different facilities
  - Different geographical locations
  - Different weather conditions



# Develop A Multi-Functional “Heat Team”

- **CHAIRER BY THE “SPENDER”**
- **CORPORATE SUPPORT**
- **SANITATION**
- **ELECTRICIANS**
- **PIPE FITTERS**
- **MILLWRIGHTS**
- **PEST CONTROL SERVICE PROVIDER**
- **OWNERSHIP FROM ALL DISCIPLINES!!!**



# Facility Preparation - Some Key Considerations





# Heat Effects On Sprinkler System

- **High temperature sprinkler heads should be specified for areas which will be heated.**
  - **High temperature heads (286 degrees F) should be used because hot spots do develop. This will prevent the accidental water release by one of the sprinkler heads.**
  - **Medium temperature heads (200 degrees F) will work with excellent air movement.**
  - **Low temperature heads (160 degrees F) are not recommended.**

# Heat Effects On Controllers And Electrical Equipment

- **Identify Control & Equipment Concerns**
- **Contact Manufacturer Supplier**
  - **Describe a Scenario**
    - **120 to 140 Degrees F for 12 to 24 Hours**
  - **Use your vendors as a resource**





# Heat Effects On Equipment Lubrication

- **Oil - Grease**

**Most probably will withstand 140 degrees.**

**If there are some special lubricants that have lower operating temperatures, check with the manufacturer for the effect of 140 degrees F. The device may have to be re-lubricated following heat treatment.**

# Heat Effects On Equipment Lubrication

- **Gear Boxes -**

**The air (and the oil) in the gear box will expand when heated. If expanded, warm air can escape through the breather, there will be no problem. If there is no breather, pressure inside the gear box may force the lubricant out of the seals. Or, if the gear box is full of oil, it will also expand, spill or be forced through seals.**

# Building And Equipment Heat Losses

- **Close and/or seal fire doors, man doors, roof vents, wall vents, and windows.**
- **Areas which are not to be included must be partitioned off if the area cannot be isolated - tarps and plastic can be used as makeshift walls.**
- **Exhaust and intake vents should be closed and/or sealed.**

# Combustible And Heat Sensitive Materials In Target Heat Areas

- **Aerosol Cans**
- **Adhesives**
- **Vitamins, Sugar and/or other Ingredients**
- **Packaging Supplies**
- **Fire Extinguishers**
- **Contractor Materials**
- **A pre-heat walk through (Mandatory) should identify any concerns not listed above.**



# Some More Pre-heat Preparation

- **Run equipment and bins, silos, etc. empty**
- **Elevator Boots opened and cleaned**
- **All sweepings and trash receptacles cleaned**
- **Sacks of product removed**
- **Portable containers emptied**
- **Open as much processing equipment as possible - Dust Collectors, Bins, Hammer Mills, Feeders, Screw Conveyors, etc.**
- **An approved residual insecticide should be applied at floor-wall junctures and across doorway thresholds to unheated areas.**



# THERMAL SHOCK

- 90 Degree F. differential rule of thumb

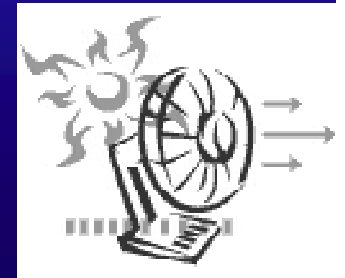


# More Preparation Specific To Your Facility

- **Prior to Heat-up**
  - Develop guidelines and your checklist
- **During Heat-up**
  - Develop guidelines and your onsite checklist
- **After Heat-up**
  - Develop guidelines and your post heat checklist

# Facility Preparation For Heat Treatment

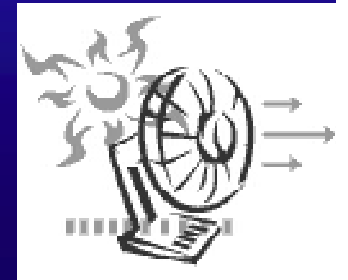
- The “P” Lesson
  - Planning, Preparation & Practice Prevents Pitiful Performance
- Learn From Others
  - Use Outside Resources
    - First Heat Treatment





# Facility Preparation For Heat Treatment

- Be Prepared
- Be Safe
- Be 120 – 140 Degrees F.
- Be Windy
- Insects Be Dead



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Thank You  
Questions ???

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