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ISSUES RELATIVE TO THE USE OF ROOF VENTS/DRAFT CURTAINS IN SPRINKLERED BUILDINGS

- What is the expected performance which will result from a smoke/heat vent and draft curtain design which complies with the code provisions for smoke/heat vents and draft curtains presently contained in the International Building Code (IBC) and International Fire Code (IFC)?
    - Are the smoke/heat vent and draft curtain provisions presently contained in the IBC/IFC intended to provide adequate venting in sprinklered buildings were the sprinkler system is adequate for the hazard protected and operates as intended (i.e. controls the fire)?
    - Are the smoke/heat vent and draft curtain provisions presently contained in the IBC/IFC intended to provide adequate venting in sprinklered buildings where the sprinkler system operates, but where the sprinkler system is inadequate for the hazard protected?
    - Are the smoke/heat vent and draft curtain provisions presently contained in the IBC/IFC intended to provide adequate venting in sprinklered buildings where the sprinkler system fails to discharge water due to a closed water supply control valve, pump failure or broken supply piping?
- Is the venting capability required for a building dependent upon the height of the ceiling in the building?
- Will smoke/heat vents operate effectively without draft curtains?
    - Will draft curtains which enclose an area of 50,000 SF (as permitted by the IBC/IFC) be adequate for smoke/heat vents to operate effectively?
    - Will smoke/heat vents prevent the spread of smoke throughout the building if draft curtains are not provided?
    - Are smoke/heat vent systems presently installed per the IBC/IFC provisions for smoke/heat vents (without draft curtains) inadequate?

    - Are draft curtains which are either 4 feet or 6 feet in depth adequate for all buildings? If the answer to this question is no, what is the maximum ceiling height where draft curtains which are 4 feet or 6 feet in depth are adequate?

- Do the listings for smoke/heat vents require that the vents be used with draft curtains?

    - Do the listings for smoke/heat vents require that the vents be installed per the requirements contained in NFPA 204?

    - Do the manufacturers' recommendations for the installations of smoke/heat vents address the issue of the location of smoke/heat vents with respect to sprinklers to avoid "cold-soldering" of the vents?

    - Do the manufacturers' recommendations for the installation of smoke/heat vents address the issue of the temperature rating of the activating mechanism for the smoke/heat vents with respect to the temperature rating and RTI of the sprinklers utilized to protect the building?

- In the event of failure of the sprinkler system to discharge water (i.e. closed water supply valves, pump failure or broken sprinkler supply piping) in a large industrial or storage building provided with smoke/heat vents and draft curtains (per the IBC/IFC), should firefighters utilize an interior attack on the fire and ignore the recommendations of NIOSH 2005-132 to utilize an exterior attack?

- Are the capabilities of all paid fire departments to control and extinguish a fire in a sprinklered industrial or storage building in the event that the sprinkler system operates (but fails to control the fire) the same?

- Are volunteer fire departments capable of controlling and extinguishing a fire in a sprinklered industrial or storage building provided with smoke/heat vents and draft curtains (per the IBC/IFC) in the event that the sprinkler system operates, but fails to control the fire?

- In the event of the failure of smoke/heat vents to open (due to the operation of the sprinkler system), should firefighters go to the roof to open the vents manually?

- What is the additional cost if smoke detectors are provided to automatically open smoke/heat vents?

- If multiple smoke/heat vents open automatically when smoke detectors are activated, how are false alarms prevented so that vents do not open during inclement weather?

- If multiple smoke/heat vents open automatically when sprinkler system water flow is detected, how do smoke/heat vents open in the event of a closed water supply valve?

- If multiple smoke/heat vents open automatically when sprinkler system water flow is detected in areas subject to freezing temperatures, how is the temperature in the building maintained above 40°F in portions of the building which are not subjected to elevated temperatures from the fire or in the event of a false alarm from the water flow alarm?

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