



SAFETY ALERT

Campus Incident—Fire

RISK MANAGEMENT & SAFETY

Date: September 2014
Category: Fire/Chemical Reactions
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Description:

A small fire occurred on Wind Tunnel. The fire was at the junction of the cool air intake and the aft-duct work on an air moving system. It was extinguished by the lab personnel using a fire extinguisher. There were no injuries or property damage.



Findings:

- The gap between the auxiliary blower access and the aft-duct work was filled with ceramic rope rated at 2000 °F. The ceramic rope was coated with 2 layers of gasket maker rated at 700 °F “intermittent”. The wind tunnel is covered by fiberglass insulation rated at 1800°F.
- The air system can reach temperatures around 700 °F through air movement, no air heaters are used in the system.
- The gasket maker was applied approximately 2 weeks prior to the fire and 24 hours dry time was given between each coat.
- The air movement system was operated for 12 hours at 200 °F the day before the fire without incident.
- The gasket maker is used as a gasket material in other areas of the system.

Root Causes:

The gasket maker ignited due to the presence of heat from the system. The temperature of system reached the maximum temperature of the gasket maker (700 °F). Additionally, the gasket maker was not used as designed. The material was applied in two thick layers which is greater than a standard gasket would require. This may have prevented the material from curing properly.

Recommended Actions:

- Permanently weld the auxiliary blower access to the aft-duct wall.
- Perform a bench test of the gasket maker to determine if this material can be used as a gasket in other areas in the system. Test the material to the worst case temperatures of the system and worst case thickness required for the material.