

2009-02

Sandblast Media Contributes to Portable Heater Fire

November 2009

Event

Site/Facility: Idaho Cleanup Project/IWTU

Sandblasting Media Contributes to Fire at IWTU Project

Reference: ICP Just In Time 2009 0023 Date: 09/30/2009

On September 24, 2009, a 20-kW portable electric forced-air heater caught on fire and was extinguished by a worker with a portable fire extinguisher. The heater was a Chromalox, Model DRA-20-43 (480 V). Preliminary investigation revealed that a significant amount of sandblasting “grit” from nearby activities had accumulated on the inside of the heater where the electronic control components are located (see photo 1). Grit had accumulated in and around the electrical contacts providing power to the electrical coils. This grit prevented the electrical contacts, which were designed to prevent an overheating condition, from operating properly (see photo 2). With the contacts stuck in the energized position, the heating elements could not turn off, even though the heater had a thermostat and an over temperature limit switch. This resulted in the unit overheating and catching the factory paint coating on fire.

<p>Important Points:</p>	<ul style="list-style-type: none"> • If sandblasting grit is used in the vicinity of any portable heater, internally inspect portable electric heaters for any evidence of grit inside. • If sandblasting grit is found inside a heater it must be removed from service. • Unless so designed, portable heaters must not be used in areas where sandblasting or similar harsh environments may exist. • If unsure of the origin or prior areas of use, if the possibility exists that a portable heater may have been used in a harsh environment, internally inspect the heater for evidence of foreign debris.
<p>Contributor:</p>	<ul style="list-style-type: none"> • New type of sandblasting “grit” was in use at the IWTU project. In order to improve safety for the workers, a new “copper” based grit was being used in lieu of the typical “silica” based grit.

Below are photographs of the portable heater after the fire.

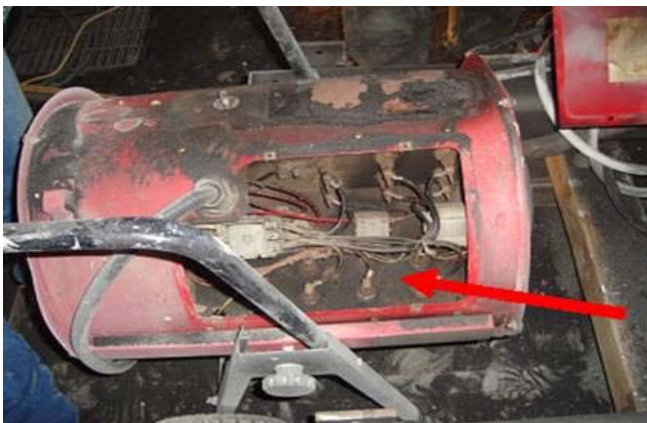


Photo 1 - Location of sandblast grit inside heater.



Photo 2 - Electrical contacts that prevent overheating.