

Fire Restoration/Renovation in Glass Manufacturing Plant

Moore Restoration Services uses Sponge-Jet Sponge Blasting™ System in ceiling and attic sections of Midwest glass plant to remove soot and charred coatings



Immediately following a plant fire, facility owners turned to Moore Restoration to remove soot and charred residual coatings. The facility had to reopen as soon as possible. The char and contamination layers to be removed from the pine wood trusses and plywood sheets covering the ceiling were from 5 to 75 mils thick. Moore Restoration's decision to use Silver Sponge Media™ #80-grit abrasive and the Sponge-Jet Sponge Blasting™ System to restore the surface was based on a few key challenges:

- **Dry Process** - Most of the plant was wood construction, which meant a dry process would be the safest and most efficient to use.

- **Low Dust** - Conventional abrasives would be too dusty for sensitive plant equipment and the nearby finished glass inventory.

- **Easy Set-up & Clean-up** - Downtime caused by extensive blast preparation and clean-up would delay reopening the factory past its projected date. A simple process was needed.

- **Quick Production** - Production rates higher than hand-wiping were critical to keep plant shut-down to a minimum. An air driven process was preferred.



Visit Sponge-Jet, Inc. at
www.SpongeJet.com
 or call **603-431-6435**
 to learn more about the
 Sponge Blasting System

Moore Restoration blasted 13,000 ft² (1,208 m²) of wood trusses and plywood-ceiling surfaces as specified. Operators blasted 10 ft²/minute (56 m²/hr), which was twice as fast as estimated. Abrasive media consumption was cut by reusing Silver Sponge Media™ abrasive 12 times. The Sponge Blasting™ System cut downtime, allowing the glass plant to reopen earlier than planned. Moore's project manager noted, "even though the wood was roughened, it was fully cleaned of all coating, char and soot - posing no problem for repainting."

Fire Restoration in Composite Material Lamination Factory

Sponge-Jet service provider uses gentle Green Sponge Media™ to clean soot and aged contaminants from concrete and sheetrock walls, steel ceilings and trusses



A production line fire at a Southeastern (US) Composite lamination factory left facility management and insurance adjusters with 32,000 ft² (2,973 m²) of black soot and odor to remove. The soot had to be removed from metal pan ceilings and trusses, concrete block and unpainted sheetrock walls - then from concrete flooring. Adjusters solicited bids to complete the project. A local area restoration contractor was awarded the job.

Contrary to conventional, manual hand-wiping methods, gentle Green Sponge Media™ abrasive with the Sponge Blasting System™ were used for the following reasons:

- **Cleaning Speed** - The cleaning technology had to be fast

because there were a limited number of hours each evening that restoration operations could be conducted. Hand-wiping with chemical wipes were ruled out due to the size of the facility.

- **Dry Process** - Sensitive equipment, live electrical conduit, and bare sheetrock walls existed, which made the use of any high-pressure water technologies too risky.

- **Simplicity** - Set-up and clean-up had to be quick and easy because factory workers would return each morning to work.

- **Sensitive and Controllable** - A comprehensive sprinkler system was mounted to ceiling trusses, therefore the process would have to be sensitive, and highly controllable near system valves and fittings.



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Sponge Blasting 5ft²/minute(28m²/hr), the project was completed in 80 working hours. Media costs were reduced by recycling Sponge Media abrasive 12 times. The contractor recorded 40% more profits than would have been realized by manual hand-wiping. Facility managers and area adjusters were thrilled with the facility cleanliness and air quality - even without use of an ozone machine.

Fire Restoration/Renovation in Zinc Galvanizing Plant

Maintenance Contract Services, Inc. uses Green Sponge Media™ abrasives and the Sponge Blasting™ System to clean black char, soot and contaminants from facility walls



A chemical storage tank fire in a Mid-Atlantic (US) galvanizing plant required quick cleaning of heavy accumulation of burned plastic, char, soot and aged contaminants from concrete walls and ceilings. Plant management hired Maintenance Contract Services, Inc. (MCS) to clean and restore 50,000 ft² (4,645 m²) in the pickling area of the plant while many manufacturing operations safely continued. After considering other cleaning and abrasive blasting technologies, MCS chose to use the Sponge-Jet Sponge Blasting™ System and gentle Green Sponge Media™ abrasives to complete the project, which was based on a few key process characteristics:

- **Speed of Cleaning** - Manufacturing operations had to continue during the cleaning process. As a result, a fast technology was required. The air-driven, Sponge Blasting System was chosen because it allowed for higher cleaning production rates, and lower manual labor costs compared to hand-wiping.
- **Dry Process** - Electrical conduit externally mounted on the walls and water-sensitive manufacturing equipment ruled out the used of high pressure water cleaning. Sponge Blasting is a dry process, with no slurry, run-off or added leachates.
- **Sensitive & Aggressive** - Tests determined which process would limit damage to the concrete substrate. Sponge Media abrasive was the only solution aggressive enough to quickly clean deposits and cause the least damage.



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MCS cleaned the heavy char, soot, and plastic deposits as estimated at 5 ft²/minute (28 m²/hr); cleaning rates in lighter areas were much higher than estimated at 12 ft²/minute (67 m²/hr). Green Sponge Media abrasive was efficiently reused 8 times - minimizing media costs. Walls were prepared for repainting with minimal interruption to operations. Facility managers and the insurance adjuster were pleased with MCS and the Sponge Blasting Process.