

## **Clean Contaminants from Turbine Parts in Power Generating Plants**

Restore turbine parts by removing tough oxide build-up, low-level radioactive contaminants, dirt and other corrosion from turbine parts using porous, sponge/abrasive composites; Suppress airborne dust and cause minimal impact to nearby working trades for fast cleaning and safe decontamination.



## Sponge-Jet abrasive blasting system is used to:

- Prepare stainless steel rotors, inner and outer cylinders, governor and generator-end brackets, diaphragms, carriers and guides to any specification
- Recondition turbine parts by removing blue oxide layers, dirt build-up and low-level radioactive contaminants
- Assure efficient reliability with no grinding marks from hand-sanding
- Thoroughly clean corners, edges and bolt heads or other hard to access areas
- Accelerate cleaning operations and overall maintenance activity by allowing other trades to work near blasting

## Used on turbines manufactured by Siemens,<sup>®</sup> Westinghouse<sup>®</sup> and General Electric<sup>®</sup>

- Controllable
  - Remove the toughest contaminants without damaging the substrate
- Safety & Reliability
- Less injuries and worker fatigue
- Protect sensitive equipment and other nearby working trades with low media rebound and airborne dust
- High Quality
- First-pass removal; no need to reblast with enhanced visibility
- Inspection can be conducted during blasting, not after
- High Productivity
- Reduce plant downtime requirements
- Low media rebound and dust allow surrounding trades to work safely without interruption
- Efficient process allows for quick setup and clean-up







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



**Case History** 

## **Cleaning Turbine Fans in Puerto Rican Power Plant**

A maintenance contractor cleans contaminants from turbine fans using Silver Sponge Media<sup>™</sup> abrasive, reduces shutdown time and saved plant money



A power plant scheduled a month-long shutdown to remove residue and aged surface contaminants from 158m<sup>2</sup> [1,700ft<sup>2</sup>] of stainless steel turbine fans. The turbine's base would also be refurbished and bearings and seals would be replaced. Plant engineers searched for a way to streamline maintenance and reduce the extra cost of sending the turbine out for cleaning. With engineering approval, the project contractor used a low dust and low rebound composite abrasive technology called Sponge-Jet Sponge Media abrasive. Silver Sponge Media abrasive with 220-grit and 320-grit aluminum oxide was selected to remove the contaminants and leave the stainless steel substrate unmarred. The contractor noted the following benefits:

Blast-Clean in Sensitive Environments - Sponge Media abrasives drastically suppress potential airborne dust at the source. As a result, simplistic contain-

ment was quickly erected and blast-cleaning took place within just five meters (15ft) from the original turbine location.

• Limit Shutdown Time - With process dust efficiently suppressed, trades were able to conduct maintenance on other parts of the turbine without interruption; maintenance that was originally scheduled to begin after blasting-cleaning.

• Sensitive yet Aggressive - Silver Sponge Media abrasive provided the perfect combination of abrasiveness and sensitivity to quickly and effectively clean the substrate.





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Using Silver Sponge Media abrasives, the contractor cut the shutdown time by 60% (30 to 10 days), blast-cleaning at 5.5m<sup>2</sup>/hr [1ft<sup>2</sup>/min]. Plant engineers remarked how easily the process was to control and were impressed that nearby trades could continue maintenance during blast-cleaning.