

# Protect What's Important



- ✓ **INDUSTRIAL SURFACES**
- ✓ **WORKER HEALTH AND SAFETY**
- ✓ **ENVIRONMENT**

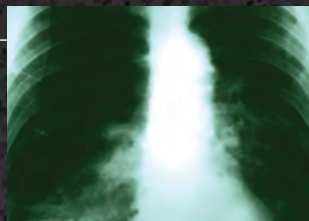
**SPONGEJET**<sup>®</sup>

*Low Dust Abrasive Blasting Technology*



# Not Protecting What's Important Can Cost Millions.

Conventional abrasive blasting methods cost companies millions of dollars every year:



## Hazardous Emissions

Elevated levels of toxins, arsenic and heavy metals in all trades have been linked to abrasive blasting activity. Sponge Media™ entraps most potentially hazardous emissions lowering worker exposure, plant liability and the costs associated with compliance, testing, litigation, treatment and long-term health care.



**\$276 BILLION  
PER YEAR**

## Corrosion

The cost of corrosion in the US is estimated at \$276 billion/year. 80% of coating failures are attributed to improper surface preparation. Sponge-Jet allows for ideal surface preparation in the most challenging environments, extending performance of all coatings – breaking the cycle of continuous maintenance and downtime.

## Sponge-Jet Protects Your Environment And Bottom Line.

The Sponge-Jet technology suppresses fugitive emissions and rebound that can lead to costly interruptions and dangerous workplace conditions.



Conventional  
Abrasive Blasting

Low Dust Abrasive Blasting  
with Sponge-Jet

## Sponge-Jet is the world's leader of clean, dry, low dust, reusable surface preparation media and equipment.

From delicate cleaning to selective coating removal to aggressive profiling of industrial substrates, Sponge-Jet offers a wide range of surface preparation solutions – and benefits.

Sponge-Jet's **low dust, low ricochet** and **recyclable** process offers:

- Lower fugitive emissions
- Less worker exposure and fatigue
- Less eye and other injuries
- Enhanced visibility and first-pass quality
- Fewer defects and rework, keeping projects on schedule
- High-quality surface preparation in sensitive or confined areas
- A solution for preparing surfaces near finished coatings, instruments and equipment
- Low inbound and outbound freight
- Less pollution, waste generation, fines and reporting
- Improved community relations
- The ability for other trades to work nearby
- Less downtime, improved asset availability
- Coatings perform longer, saving on maintenance costs
- Easier staging, containment, ventilation and clean up
- Less waste, disposal and material handling

## The Result?

- **Greater production and efficiency**
- **Less liability, litigation, compliance reporting**
- **Improving both environmental AND corporate efficiency**
- **Increased profits and production**





### Equipment Breakdown

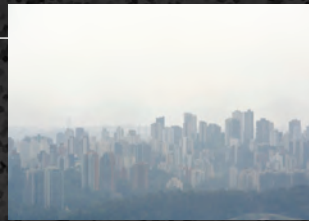
Equipment breakdown can be disastrous – instruments, electronics and rotating equipment are all susceptible to premature failure if exposed to abrasive dust or water. The Sponge-Jet technology eliminates up to 99% of abrasive dust, improving overall equipment and plant reliability.



**\$25 MILLION PER MONTH**

### Eye Injuries

Abrasive blasting and related work is a leading cause of eye injuries. 1,000 eye injuries a day cost \$300 million a year in the US workplace alone. Sponge-Jet does not ricochet like other abrasives, thus reducing one of the major causes of eye and other workplace injuries.



### Pollution

Abrasive blasting is the largest cause of fugitive emissions in a recent shipyard study. Hazardous particles (less than ten microns) cause upper respiratory problems, smog and global pollution. The Sponge-Jet technology captures up to 99% of these emissions, protecting the environment and public health.



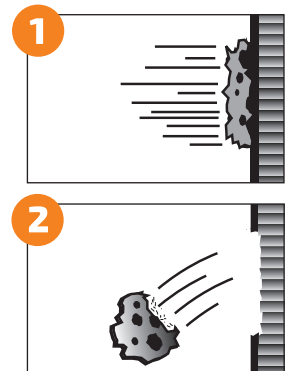
**\$1 MILLION PER DAY**

### Downtime

Shutdowns can cost plants more than a million per day. Those involving surface preparation are longer than necessary because mechanics, welders, electricians and other trades cannot operate near abrasive blasters. Sponge-Jet allows for faster project completion.

## The heart of the Sponge-Jet System is its Sponge Media. This technology combines the containment capability of sponge and the cleaning and cutting power of conventional abrasives.

The pliant nature of Sponge Media abrasives allow its particles to flatten on impact (fig. 1), exposing the abrasive. After leaving the surface, the media expands, creating a vacuum – entrapping most of what would normally have become airborne contaminants (fig. 2). This is referred to as Sponge Media's MicroContainment.™



## The Sponge-Jet Process:

**Sponge Media** abrasives are available in 20 types for any application. All provide dry, low dust, low rebound blasting.

**Sponge-Jet Feed Units** propel Sponge Media abrasives to the surface. A centralized panel provides adjustment of blast pressure and media feed rate allowing for precise control.



**Sponge-Jet Recyclers** classify and clean Sponge Media abrasive for reuse. Blasted media is collected and processed through an electrically or pneumatically powered classifier – separating reusable Sponge Media abrasives from oversized debris, and fine waste (spent media and contaminants).



# The Solution of Choice for any Industry or Application

- ✓ Bridge Maintenance
- ✓ Fire Restoration
- ✓ General
- ✓ Historic Restoration
- ✓ Lead Abatement
- ✓ Marine and Offshore
- ✓ Mold Remediation
- ✓ Nuclear Remediation
- ✓ Oil and Gas
- ✓ Petro Chemical
- ✓ Power Generation
- ✓ Pulp & Paper
- ✓ Water Treatment

## MARINE

- US NAVSEA Naval Sea Standard 009-32 released that the "Sponge-Jet media and process may be used as an alternative to [abrasive blasting and power tool cleaning to] obtain SSPC-SP-10 or SSPC-SP-11 cleanliness"
- Used by Rosyth (UK), Toulon (FR), Puget Sound (US), Talcahuano (CH), Yokosuka (JP), Esquimalt (CA) and other Naval Bases
- Chosen to blast hull insides of the Chile-to-Southpole ice breaker
- Ballast tank and weldseam-approved on the world's largest tanker; Four-year follow-up inspection revealed like-new coating

## OIL, GAS & CHEMICAL PROCESSING

- Specified by PETROBRAS, ExxonMobil, PEMEX, PETRONAS
- At PDVSA's Amuay Refinery (the world's largest) shutdown time was reduced by 60%, cancelling two, two-month overhauls worth \$960M
- PEMEX has specified to use Sponge-Jet on more than four million square meters (43 million square feet) of steel

## SURFACE PREPARATION AND COATING REMOVAL

- Dow Chemical film polymer ducts are now prepared with Sponge Media, saving complete start-up batches of product that were formerly considered waste from coal slag contamination

## Awards and Recognition

- Selected by NASA's Acquisition Pollution and Prevention office being "the superior technology" for low emission surface preparation/depainting
- Sponge-Jet was selected for use on White House buildings, the Wisconsin and Idaho State capitol buildings, and National Park Service projects for cleaning and restoration
- The Carolopolis Award given to the Kahal Kadosh Beth Elohim Synagogue in Charleston, SC USA for exterior preservation using Sponge Media
- The Stora Produktivetspriset Awarded to Skandinavisk Industri Utveckling of Sweden for productivity improvements using Sponge Media abrasives

**MARINE FOCUS**

### Shipyard Uses Sponge Media; Saving \$1.2 Million


Mid-Atlantic US

With 9,300 sq/m (100,000 sq/ft) of bilge to be prepared, the shipyard's production engineer calculated a savings of \$1.2 million in total labor cost by using Sponge-Jet in place of the incumbent – needle gun preparation. It was determined that four complete Sponge-Jet blast systems replaced 24 needle gun operators.

	Power Tools	Sponge-Jet
Equipment Units:	24	4
Operating Hours:	50,000	1,667
Hourly Rate:	\$26.50	\$26.50
<b>Total:</b>	<b>\$1,325,000</b>	<b>\$44,175</b>

### Switch to Sponge-Jet Yields 40 more hours of Production for PETROBRAS Platform

Bacia de Campos, Brazil



A scheduled maintenance closing for platform P-37 was cut short by two days, reported the rig's Production Closing Execution Coordinator. Part of the outage entailed removing fiber glass coatings and oil residue from sensitive areas. The use of Sponge-Jet with reduced dust and rebound resulted with Train A opening 41 hours and Train B opening 33 hours ahead of schedule. The US retail value of two days worth of oil production time is roughly \$12 million.

### Australian Barge Manufacturer Saves \$120,000 per Navy Barge when Using Sponge-Jet

Aluminum barges needed extensive preparation during manufacturing. The previous method, handtools, took six men and 65 shifts to prepare each barge for paint. With Sponge-Jet it took three men, nine shifts.



<b>Handtool (Labor) Cost Per Vessel:</b> 6 men x 65 shifts x 8 hrs @ \$45/hr = <b>\$140,400</b>
<b>Sponge-Jet (Labor and Material) Cost Per Vessel:</b> 3 men x 9 shifts x 8 hrs @ \$50/hr = <b>\$10,800</b> (Sponge Media and Equipment) = 9,220.00
<b>Savings of \$129,600 in labor per vessel.</b>

See video and industry-specific information, visit us online at [www.spongejet.com](http://www.spongejet.com)



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