WSI High Velocity Thermal Spray

From the World Leader in Pressure Equipment Life Extensions

High Velocity Thermal Spray: Shop & Field Applied Capabilities

The World Leader in Pressure Equipment Life Extension - WSI has added High Velocity Twin-Wire Arc Spray to our extensive line of corrosion/erosion mitigation services.

WSI's High Velocity Thermal Spray Solution offers our client partners a metal coating designed to freeze the existing surface condition of critical assets suffering from corrosion, erosion, and wear damage. Through superior permeability and uniformity, this application for custom life extension withstands aggressive processes, high temperature, and high-pressure environments while eliminating the potential for Heat Affected Zones (HAZ) and no requirement for Post-Weld Heat Treatment (PWHT).





45+ Years of Engineered Field Repair Solutions to Industrial Critical Components

Key Benefits

Versatile Single-Contractor Solution - WSI provides a comprehensive range of mitigation services against several corrosion environments including abrasion, erosion, and high-temperature conditions to extend the life of critical assets adapted to our client-partner's needs. This includes:

- Weld metal buildup with like material
- Corrosion resistant overlay
- Structural weld overlay
- High Velocity Thermal Spray

Custom Field-Ready Systems - WSI leverages our extensive machine-welding history in developing rugged brown-field ready equipment suited for confined space conditions.

Schedule Optimization - WSI mechanically-bonded metal coatings are applied efficiently to a wide range of substrate materials, incorporating high velocity and density, reducing the spraying time with outstanding quality.

Material Analysis & Recommendation

WSI offers proprietary and commercial corrosion-resistant alloys (CRAs), each with unique benefits. The selection of CRAs will depend on the application process and environment.

WSI offers Fe-based, Ni-based, and Co-based alloys that deliver unmatched defense in severely erosive, abrasive, and corrosive environments.

WSI's Materials Science Department, with its extensive expertise, will partner with customers' facilities to select the correct alloy composition for each unique situation and process, instilling confidence in the selection process.

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Comprehensive Field Service Application

Scope Area Mapping

Field Coating In

Abrasive Blasting & Profiling

Modular Field Ventilation Services

Project Management & Planning Services

Scalable-Skilled Field Craft

Testing & Training Services, including Client Mockups

Global Infrastructure

In-house Engineering Services - Ph.D. Material Scientists provide customized solutions to mitigate erosion, corrosion, or wear issues by testing or simulation.

Single-source contractor capable of providing:

- High Velocity Thermal Spray Services
- Semi-Auto/Full-Auto Machine Welding Services
- Combination Field-Applied High Velocity Thermal Spray & Machine Welding Services
- Structural & Weld Engineering Analysis
- Coating Material Analysis & Recommendation
- Field Machining Services
- 45-Year History of proven in situ repairs performed under a schedule-constrained environment



Prioritizing Safety & Environment

WSI's industry-approved modular Ventilation Systems are explicitly designed to eliminate Hexavalent Chromium (Cr(VI)) exposure (less than $1 \, \mu g/m^3$) to personnel and the surrounding environment. WSI's commitment to health & safety ensures production schedules are maintained with no concerns of a work stoppage due to safety and environmental interference.



Industries Served

- Refining & Upgrading
- Power Generation (WTE & Fossil)
- Pulp & Paper
- Petrochemical
- Metals & Mineral Processing
- Wastewater Treatment



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