

Your Partner in Asset Integrity & Energy Efficiency



IGS partners with operators to continuously improve asset performance; extending asset life, enhancing efficiency and maintaining reliable, uninterrupted operation.

Our integrated approach combines:

Performance & Energy Efficiency

Restoring and sustaining thermal efficiency, reducing fuel consumption, and lowering emissions

Asset Integrity & Life Extension

Engineered protection for critical equipment to ensure long-term integrity and uptime



Thermal Efficiency Evaluations

Every performance and energy efficiency project begins with a data-driven evaluation to identify where performance is being lost and where the greatest value can be recovered.

Key Benefits

- Identify hidden efficiency losses and operational bottlenecks
- Prioritize the highest-value performance improvement opportunities
- Quantify fuel savings, emissions reduction and capacity increase
- Receive actionable recommendations with ROI and payback estimates

[Learn More ›](#)

Recent Results

- Performance degraded to 50% of design convection duty identified prior to cleaning
- 4.0 MMBtu/hr fuel savings validated following implementation
- 20% increase in convection duty recovered
- 1,870 tonnes/year CO₂ reduction identified
- Up to 5% increase in heater run length

[Read Case Study ›](#)



Fired Heater & Heat Transfer Optimization

TubeTech ROVEX™ Robotic Convection Cleaning

Comprehensive offline robotic convection cleaning that restores heat transfer and maximizes fired heater performance during planned turnarounds.

Key Benefits

- 90%+ fouling removal guarantee
- 2-5% increase in thermal efficiency
- Up to 15% reduction in CO₂ emissions
- ROI within 3 months

[Learn More ›](#)

Recent Results

- 130°C (234°F) reduction in stack temperature
- 7.2% improvement in thermal efficiency
- US\$900K annual fuel savings

[Read Case Study ›](#)





TubeTech™ Shell & Tube Heat Exchanger Cleaning

Advanced shell and tube cleaning to restore heat transfer, maximize exchanger performance, and reduce turnaround duration.

Key Benefits

- 90%+ fouling removal guarantee
- Restores heat transfer to IRIS inspection standards, first time
- Reduces downtime and extends asset life
- Cleans complex exchanger designs, including TWISTED TUBE® bundles

[Learn More ›](#)

Recent Results

- 22,317 tubes cleaned across 6 plant areas
- 6,422 tubes restored to IRIS inspection standard
- 20% IRIS inspection coverage reinstated (up from 5%)
- Zero turnaround delays across two consecutive TARs

[Read Case Study ›](#)





Cetek® Fired Heater Performance Coatings

High-emissivity ceramic coatings for refractory and process tubes that improve radiant heat transfer, increase efficiency, and extend fired heater run length

Key Benefits

- Flexible benefits - increase capacity or reduce fuel consumption based on operational priorities
- Improve heat flux distribution to reduce hot spots and coke formation
- Lower tube temperatures to extend run length and decoking intervals
- Reduce CO₂ and NO_x emissions

[Learn More ›](#)

Recent Results

- 5-6% increase in unit throughput with no increase in fuel firing
- 30-50°C reduction in bridge wall temperature
- Fuel consumption reduced while operating at higher production rates
- ROI achieved in just 6 months
- 111% internal rate of return (IRR)

[Read Case Study ›](#)



Hot-tek™ Online Maintenance & Performance Services



Hot-tek™ enables operators to inspect, clean, and repair fired heaters while they remain online. Our engineered services address refractory damage, fouling, tube scaling and instability, helping avoid unplanned shutdowns, restore performance and safely extend operation to the next planned turnaround.

LanceScope™ Inspection

Identify fouling, refractory damage and tube condition during operation.

[Learn More ›](#)

Refractory Repair

Repair refractory damage and shell hot spots without shutting down.

[Learn More ›](#)

Hot Access Creation

Create permanent access points for online inspection, cleaning and repair.

[Learn More ›](#)

Convection Cleaning

Restore heat transfer and improve fired heater efficiency online.

[Learn More ›](#)

Tube Descaling

Remove fireside scale to reduce tube temperatures and improve performance.

[Learn More ›](#)

Tube Stabilization

Stabilize compromised tubes and safely extend operation.

[Learn More ›](#)

SCR Catalyst Restoration

Remove fouling to restore gas flow and reduce pressure drop.

[Learn More ›](#)

Avoid shutdowns • Maintain production • Restore efficiency • Extend run length • Rapid global response

[Read Hot-tek Case Studies ›](#)

HVTS® Protective Cladding

Best for: Assets with adequate remaining wall thickness.

Description

Applies a corrosion-resistant alloy barrier directly onto existing equipment to prevent further corrosion and erosion while extending service life.

[Learn More ›](#)

Key Benefits

- Extend asset life without replacement
- Prevent future corrosion and erosion
- No heat affected zone (HAZ) or Post Weld Heat Treatment (PWHT)
- Faster execution than weld overlay



Weld Build-Up + HVTS®

Best for: Assets approaching or below minimum wall thickness.

Description

Automated weld build-up restores structural thickness before HVTS® provides long-term corrosion protection.

[Learn More ›](#)

Key Benefits

- Restore structural integrity
- Protect against future corrosion
- Reduce replacement costs
- Optimize turnaround scope



RapidClad® Automated Weld Overlay

Best for: Severe corrosion, erosion or aggressive process environments requiring a permanent metallurgical solution.

Description

Applies a corrosion-resistant alloy through automated welding to permanently upgrade exposed metallurgy.

[Learn More ›](#)

Key Benefits

- Restore thickness and pressure boundary
- Permanent metallurgical protection
- Automated, repeatable quality
- Suitable for high-corrosion environments



Which Solution Is Right?

Asset Condition	Recommended Solution
Wall thickness above t-min	HVTS®
Wall thickness below t-min	Weld Build-Up + HVTS®
Severe degradation	Automated Weld Overlay + HVTS®
Beyond repair	Replacement

Typical Applications

- Wet Gas Systems (Desalters, Slug Catchers, Pipes)
- Crude & Vacuum Distillation Units (CDU / VDU)
- Amine Columns
- Demercaptanization / Merox Units
- Drums
- Heat Exchangers
- Fractionators
- CO₂ Strippers
- Quench Towers
- Delayed Cokers (DCUs)

Proven Across Critical Assets

Amine Stripper

HVTS® protected a gas processing amine stripper from H₂S/CO₂ corrosion, with repeat deployments over more than a decade making it the operator's preferred corrosion protection solution.

[Read Case Study ›](#)

Quench Tower

HVTS® replaced traditional repair options to protect a quench tower from organic acid corrosion, reducing turnaround duration while avoiding welding, PWHT and equipment replacement.

[Read Case Study ›](#)

FPSO Deaeration Tower

Weld build-up and HVTS® restored pressure boundary integrity and eliminated corrosion risk in a critical offshore process vessel without extending the shutdown schedule.

[Read Case Study ›](#)

Slug Catcher Piping

An integrated HVTS® and automated CRA weld overlay solution protected over 700 m of sour-service pipework, eliminating replacement while delivering Inconel-equivalent corrosion resistance.

[Read Case Study ›](#)

Why IGS

- **Vertically integrated** - We design, deploy, and validate our own technologies
- **Single point of accountability** → Reduced risk and faster execution
- **Global teams with rapid mobilization and local presence**
- **Solutions engineered for safe online application and minimal disruption**
- **Trusted partner delivering 600+ projects annually worldwide**
- **40+ years' experience in asset integrity & energy efficiency**





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