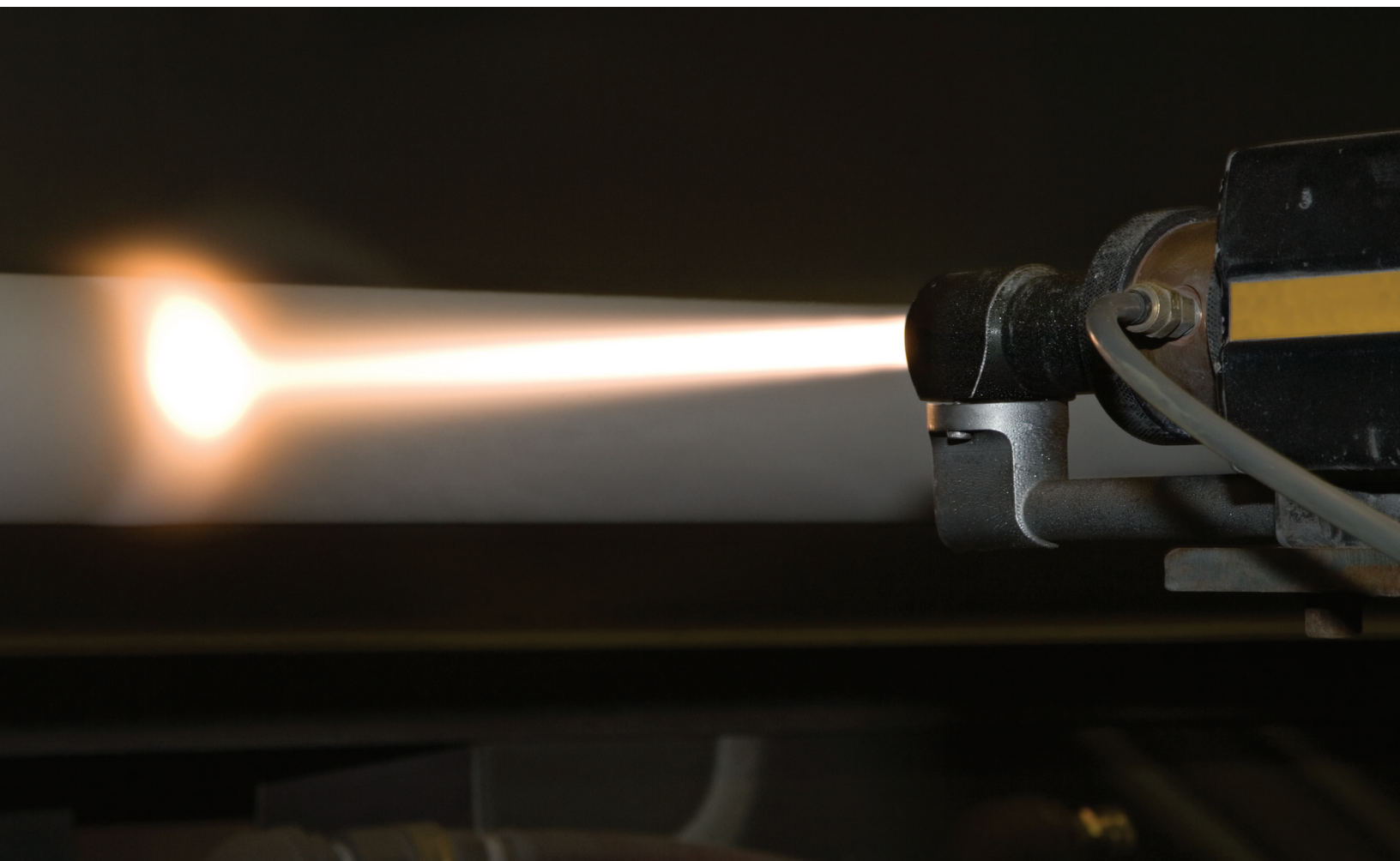


Advanced Surface Technology

For Hydraulic Cylinder Rod Reconditioning



Resurfacing Alternative to Chroming Extends Component Life and Reduces Downtime

Introducing a new high-velocity thermal spray process for resurfacing hydraulic cylinder rods and other cylindrical components. Advanced Surface Technology offers several advantages over traditional chrome plating:

- Can last up to three times as long in the same application
- Offers better wear resistance
- Reduces time required to complete repairs
- Is more environmentally friendly



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Advanced Surface Technology

How AST Works

1. Salvaged components undergo straightening.
2. New and salvaged components undergo grit-blasting to prepare and clean the surface for the thermal spray.
3. Hot combustion gases near 5,000° F (2,760°C) are channeled and combined with a fine metal powder and accelerated through a nozzle at more than three times the speed of sound.
4. The surface is ground to like-new specifications.
5. A final grinding operation gives the surface a super-fine polish.

Benefits of AST

Seals last 2 - 3 times longer

The AST surface lasts longer than chrome and is 2x more wear resistant.

Anti-Corrosive

AST is 5x more corrosive resistant than chrome plating. The composition of the Oilsands compromises seals in conventional cylinders.

Reduces/eliminates micro-cracking

Even when new, most metal coatings reveal micro-cracks under magnification. With time and use these cracks allow rust and corrosion to invade the surface, adversely affecting the performance and wear life of the component. AST dramatically diminishes corrosion so surfaces and any seals which come in contact with them last more than twice as long.

Higher bond strength

Low shrinkage creates coatings in compression, resulting in very high bond strengths and excellent resistance to thermal cycling.

AST takes 6x less time to apply (ie: chrome = 18hrs vs AST = 3 hrs)

Improved R & R TAT
Improved on-shelf availability

AST is an environmentally friendly alternative to chrome

Implementing AST coatings will reduce the emission of Hexavalent Chrome and eliminate a toxic environment.

Superior Wear Characteristics

The metal alloy coating created by AST is harder than chrome plating and provides greater resistance to scratching, bending and denting, which, in turn, helps prevent contaminants from entering the system. The AST surface also is more dense, so it resists corrosion and oxidation exceptionally well.

Extended Component Life

The benefits of AST have been demonstrated both in the field and in the lab. Field tests indicate that AST increases hydraulic cylinder rod life by up to three times. Likewise, lab tests using Cat seals show that rods resurfaced using AST extend seal life by 50 percent, as compared with chrome-plated rods.

Faster Turnaround

Unlike chroming operations, the AST process is performed in our shop, typically in a single shift. This helps reduce machine downtime and lower costs.

More Environmentally Friendly

AST by-products can be recycled or reused.

