

BLAZE®

THERMAL BORON DIFFUSION TECHNOLOGY

Eliminate Common Challenges Using Our Unique Thermal Boron Diffusion Technology

Mechanical wear, corrosion and abrasion are the three most common production challenges customers face during field operations, which can lead to costly equipment maintenance or replacement, and production downtime. Little has been done to innovate new solutions to these problems - until now.

Endurance Lift Solutions and our parent company have entered into an exclusive, worldwide partnership to bring a leading-edge thermal boron diffusion technology, BLAZE, to the artificial lift sector.

About BLAZE

BLAZE is a treatment process that uses a proprietary chemical formula to produce a uniformly deposited, slick and abrasion resistant layer within a metal's surface. The treated surface reduces mechanical wear, protects against corrosion and resists abrasion, ultimately enhancing the life span and productivity of oilfield equipment.

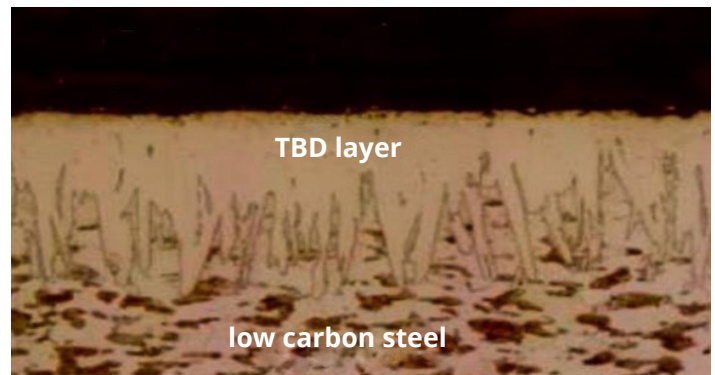
Unlike coating and plating products applied to a metal's surface, BLAZE is diffused - preventing changes to part dimensions while providing a protective surface that isn't brittle and won't flake or chip under impact.

Improve Your Equipment's Run Life

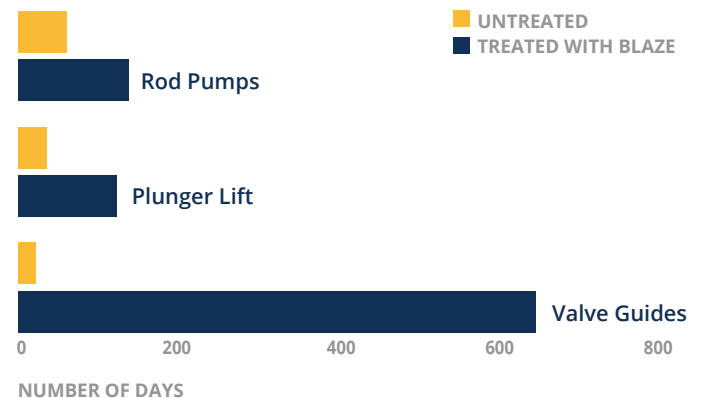
BLAZE treated products have successfully achieved run life improvements of 200-800 percent*, helping you:

- Prevent downtime
- Reduce maintenance costs
- Cut down on routine equipment changes
- Decrease equipment purchases

*Improvement percentage based on specific part being treated



Microscopic view of BLAZE treated surface with solid and uniform depth of .003 inches. Unlike conventional coating and plating products, BLAZE does not alter the surface dimensions of the treated part.



HSE Advantages

Oil and gas companies that utilize BLAZE treated equipment frequently cite the positive impact on their own HSE programs. By minimizing the need for maintenance operations, BLAZE reduces the risk of safety and environmental incidents. Our customer partners also benefit from reductions in:

- Methane emissions from gas wells due to less frequent opening of the wellhead to change plunger lift plungers.
- Fuel utilization in the field by decreasing the number of trips to the well to change valve trim, plungers or other production equipment.
- Electricity usage on beam pumping wells due to a decrease in friction in the sucker rod string when utilizing BLAZE treated couplings.
- Energy used, and emissions generated, by workover rig callouts to the well as a direct result of increased run life.

Additionally, the BLAZE diffusion process is significantly safer for our employee team members than many, if not all, other types of surface treatments. Our technology avoids the use of chemicals hazardous to their health and well-being. Plus, the proprietary BLAZE compound is environmentally safe and recyclable for a 100% green life cycle.

Compatibility Across Materials and Products

Available as a treatment add-on to a variety of Endurance products, BLAZE is compatible with an assortment of materials including cast iron, mild-carbon steel, chrome-moly steel, stainless steel, inconel and Stellite.

Look for the BLAZE badge throughout our product offering to see which parts qualify for treatment.



Contact your local representative for more information on BLAZE products or our treatment as a service (TAAS).



LOW COEFFICIENT OF FRICTION

Surface provides reduced coefficient of friction over base metal and competing coatings – permanent lubrication regardless of load



ABRASION RESISTANT

1800-2300 Knoop | 116 Rockwell C (extrapolated)



CORROSION RESISTANT

Enables longer life in challenging downhole and surface conditions facing CO₂ and H₂S

