

## Thermal spray Solutions for Hydraulic Cylinders

Hydraulic piston rods are utilized in a broad variety of industrial areas such as civil, industrial and offshore. A hydraulic cylinder is a mechanical moving mechanism that gives a force through a stroke.

Smooth and hard surfaces are required on the outer diameter of the piston rod for proper sealing. Typically piston rods are hard chrome-plated, but in the production of hard chromium plating hexavalent chromium is produced. Hex chrome is a well known carcinogen.

Weartech's technical director, Adam Wintle states "The Thermal Spray process has been used for years as a replacement for hard chrome in the U.S. and Europe due to stringent health regulations but this has not taken off in South Africa yet".

Thermal spray offers several alternative super alloy, ceramic or carbide based coatings as replacement for hard chrome plating. These coatings are applied mostly by High Velocity Oxygen Fuel (HVOF) or Plasma Spray equipment.

Thermal sprayed surfaces resist aggressive environmental conditions such as wear and corrosion. Many thermal sprayed coatings outperform the hard chrome plated coating. The coatings that are applied are extremely hard and sometimes require finishing with diamond finishing products.

For more information please contact Adam Wintle at Weartech.

