PCM HARDSHIELD

keep it moving 🗖

PCM is pleased to provide an alternative to chrome plating for our Artificial Lift PCP rotors. **PCM HardShield** uses a HVOF (High Velocity Oxygen Fuel) thermal process which applies a coating to the rotor which has advantages over the traditional electroplating of chrome. The **PCM HardShield** coating provides significantly improved abrasion and corrosion resistance.

PCM HardShield uses tungsten carbide in a proprietary matrix developed and refined through extensive field and lab validation. The formulation offers excellent resistance to solids abrasion and strong protection against corrosion, proven across various operating environments.

Accelerated lab testing using PCM's Miller test system had one sixth the wear rate with tungsten carbide HVOF, as compared to standard chrome plating.

FEATURES

• A carbide coating is applied to the rotor using an HVOF process

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- The coating is polished in a similar manner to chrome-plated rotors
- Dimensional accuracy and surface finish is the same as for PCM's chrome-plated rotors

) BENEFITS (RELATIVE TO CHROME PLATING)

- Increased resistance to abrasion
- Increased resistance to corrosion
- Longer pump run life.



Artificial Lift Solutions



In a field trial, the **PCM HardShield** significantly outperformed chrome plating in an application in which slugs of solids were known to pass through the PCP. The customer had previously observed that after a torque spike (due to solids in the pump), the pump volumetric efficiency would drop drastically.

With the **PCM HardShield** rotors in the trial, several torque spikes were observed in operation with no corresponding decrease in volumetric efficiency.







Mean Time to Failure (months)

Chrome Plating PCM HardShield