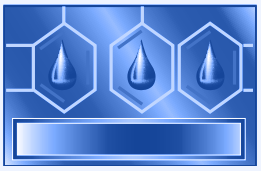
Nitrotec®

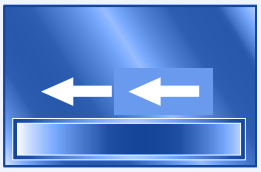
The alternative to Cr Plating

High wear resistance

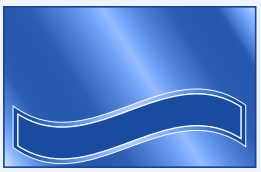
High surface hardness



improved corrosion resistance



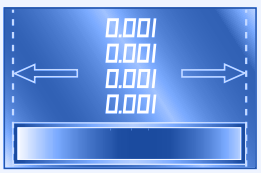
Reduction of the friction coefficient



Improved fatigue strength

Aesthetic attractive anthracite / black appearance

Cost reduction on material possible



Good dimensional and shape accuracy

Operating from dedicated facilities across the UK:
Birmingham, Blackburn, Cheltenham, Letchworth, Luton, Telford.

Visit our website for further information: www.hauckht.co.uk

For technical enquiries, contact one of our specialists:
01582 361361 or adrian.locke@hauckht.org.uk

Nitrotec

The alternative to Chromium Plating

Nitrotec® benefits:

- ✔ Environmentally benign
- ✔ Superior corrosion resistance
- ✔ Wear resistance
- ✔ Increased fatigue strength
- ✔ Excellent dimensional control
- ✔ Uniform coverage
- ✔ Good penetration down bores
- ✔ No adhesion problems

Application: Pistons and Rods.

Piston Rods

Material 0.1 – 0.4% Low Carbon Steel.
A traditional technique in the manufacture of Gas Piston Rods is to machine the rod from hard chrome plated low or medium carbon steel bar. Nitrotec processing is capable of producing all the design requirements for the application: Wear resistance, Surface topography, Corrosion resistance and Finish.

The aesthetic appeal of fully black components, with a pleasing smooth finish reinforces to consumers the concept of strength and reliability of the item.

Chrome Plating – issues

- ✕ Microcracking
- ✕ Poor corrosion resistance and blisters
- ✕ Non uniform coverage
- ✕ Poor penetration in tube bores and holes
- ✕ Environmentally unfriendly

Nitrotec "S"

Material Typically 0.15 – 0.4% carbon steels. Nitrotec S is a treatment followed by a mechanical polish to regain the surface finish, followed by a post oxiding treatment. This polished finish produces an improvement in both frictional characteristics and corrosion resistance.

This improvement in performance is shown by the two struts shown below. Both components are shown after a neutral salt spray test. The results were that 15 microns of hard chrome plating lasted 24 hours, yet the Nitrotec "S" strut exhibited no corrosion after 240 hours neutral salt spray test.

Delivering components with a chrome like finish is provided by the Nitrotec "S" process. Where a component has become recognised as chrome plated – manufacturers can now use Nitrotec to achieve far superior results of corrosion resistance with a similar appearance.

Application: Struts.

Application: Chrome plated Swivel Hubs.

Swivel Hub

Material 0.32 – 0.40% carbon steel, 1.3–1.7% manganese steel (forged) hardened and tempered to 201–255 Hb.

This OEM manufacturer received many service complaints about oil leaks around the seal which wiped over the bowl. Leaks were caused by the chrome plating corrosion, which was lifting up in flakes and cutting into the seal.

Application: Nitrotec treated Swivel Hubs – after 20 times longer in the test.

Better Solution

The Nitrotec treatment on the swivel hub components solved the oil leaks, greatly improved corrosion resistance, and added improved fatigue strength to uplift available axle load. This delivered a better manufacturing solution against all parameters.