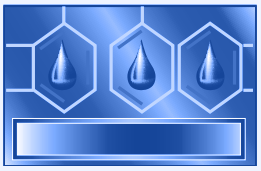
HAUCK HEAT TREATMENT

Nitrotec®

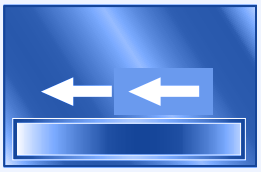
Making steel wear and corrosion resistant

High wear resistance

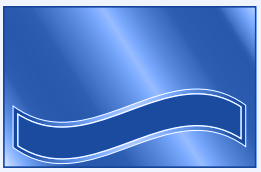
High surface hardness



improved corrosion resistance



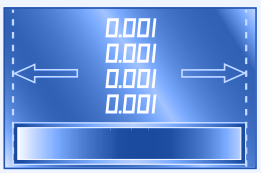
Reduction of the friction coefficient



Improved fatigue strength

Aesthetic attractive anthracite / black appearance

Cost reduction on material possible



Good dimensional and shape accuracy

aalberts

HAUCK HEAT TREATMENT

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

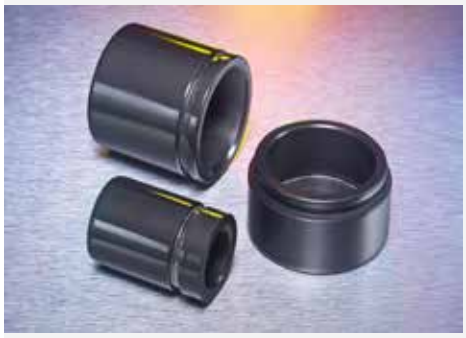
Nitrotec

Making steel wear and corrosion resistant

Nitrotec®

Nitrotec is a worldwide trademarked Surface Engineering Process for the treatment of steels and cast irons carried out in the temperature range of 550 – 740°C using a gaseous nitrogen bearing atmosphere.

The treatments develop iron nitride surface compound layers between 5 and 50 um thick, supported by a nitrogen rich diffusion zone in the substrate.



Application: Piston

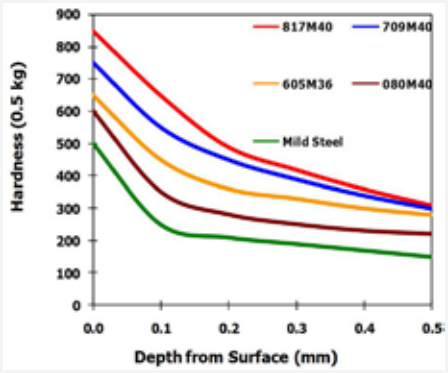
An innovative oxidation technique, combined with specially formulated aqueous quenchant and organic sealant allows this unique technology to produce an unparalleled combination of beneficial properties.
The Nitrotec process is able to handle high volumes of components quickly and efficiently, typical component sizes range from a few grams to over a tonne.

Application: Switchgear

Beneficial Properties:

Wear Resistance

The high surface hardness of the compound layer, and the presence of surface micro porosity, capable of retaining lubricant, produce an excellent wear resistance surface.



Bearing Characteristics

Because of the ability to retain oil and the inherent wear resistance, Nitrotec treated surfaces may operate in contact with one another without the need to employ individual bearings.

Indentation Resistance

Specific hardness profiles indicate the capability of Nitrotec treated components to resist indentation from point contact surface loading.

Suitable Materials for Nitrotec® treatment:

Low carbon steels, low alloy steels and cast irons.

Not suitable:

Stainless steels and high chromium steels.

Application: Ball Studs

Corrosion Resistance

Nitrotec combined with an organic sealant retained in the micro porous layer, imparts corrosion resistance superior to that of electro plated components, and comparable to that of medium grades of stainless steels. A combination of Nitrotec finishes with a range of organic sealants give salt corrosion resistance of up to 400 hours.

Application: Pivot Pins

Strengthening

When non alloyed steels are rapidly cooled after Nitrotec treatment, strengthening of thin sections occurs. This results in an increase in both the yield strength of the base material and its fatigue strength. Weight saving is possible by reducing the section size.