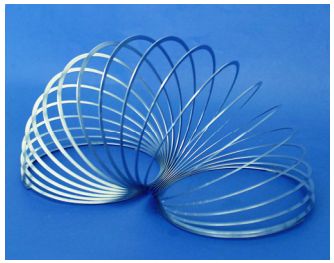
NITREG®-S & NANO-S™ TECHNOLOGY

Controlled Potential Nitriding of stainless steels

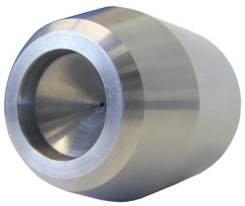
NITREG®-S is a process in which stainless steel may be nitrided, with complete control over the formation of nitrided layers.

Piston segments

Material:
AISI 440B



NANO-S™ is a surface hardening process that improves the wear and galling resistance of stainless steel components ***without affecting the inherent corrosion resistance****. The process diffuses nitrogen and/or carbon into the surface of the steel, creating a new phase structure, the S-Phase, which provides extremely high hardness.*



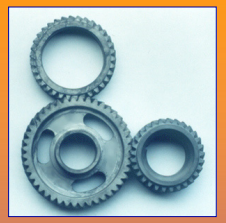
Injector
Petroleum application

NANO-S™ reduces premature wearing of injector hole caused by abrasive particles flowing through during high pressure process .

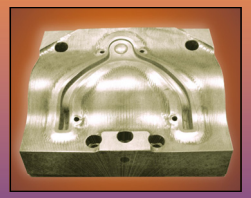
Ball Valve
Refinery application

Frictional wear caused by metal to metal contact is significantly reduced with NANO-S™.

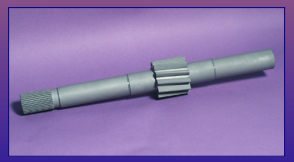
APPLICATIONS



GEARS



FORGING DIES



PINION GEARS

EXTRUSION DIES

AND MANY OTHERS...

CONTACT:

Alexandre Dionne

Sales & Service Technician
514-335-7191 ext. 157
Alexandre.Dionne@nitrex.com

pr/wrt/flye004_servicesf

Green Solutions

NITREX METAL

INNOVATIVE SOLUTIONS IN NITRIDING

10 REASONS FOR SWITCHING TO NITREX

1. Advanced technology
2. Improved service life
3. Improved wear and corrosion resistance
4. Repeatable results
5. Optimal properties
6. Increased production
7. Lower manufacturing costs
8. Controlled processing
9. Metallurgical laboratory services
10. Environment friendly technology

AMS 2759/10 & 2759/12 Compliant

www.nitrexheattreat.com

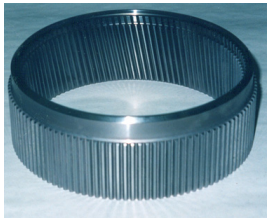
NITREG® TECHNOLOGY

Controlled Potential Nitriding

Valve springs mass produced by major US car manufacturer
Result: Nitreg® nitriding increased fatigue life by 35%

Exhaust valve
Material: X45CrSi9-3
Result: Nitreg® selected because nitrided layer retained high wear resistance in service.

Transmission gear for light trucks mass produced by major US truck manufacturer
Material: 42CrMo4



Engine injectors
Material: X40CrMoV51
Result: Nitreg® produced deep diffusion case with zero white layer

TECHNOLOGIE NITREG®-C

Controlled Potential Nitrocarburizing

For applications requiring a high ε– content, excellent wear resistance and enhanced corrosion resistance

Gas Spring Rods treated by NITREG®–C

Specification	Required	Results
Surface Hardness	> 400 HV	590 HV
Corrosion Resistance	> 144 hours	400 hours

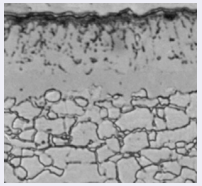
Appearance after 560 hours in salt spray as per ASTM B117

TECHNOLOGIE ONC®

Controlled Potential Nitriding or Nitrocarburizing and Post Oxidation

Appearance of Brake Pistons after 400 hours of salt-spray

Appearance of Brake Pistons after 400 hours of salt-spray

APPLICATION	Automotive Seat Rails	Throttle Valves
Steel Grade	1006	1017
Microstructure		
1st Corrosion Spot in Salt-Spray	339 hours	483 hours