

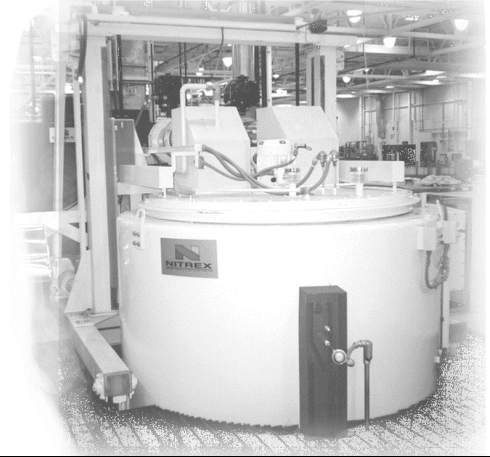
# NITREG® NITRIDING TECHNOLOGY

*A Proven Metal-Enhancing Technology*



In more than 250 installations worldwide, Nitreg® nitriding and nitrocarburizing technology is exceeding the metallurgical specifications written originally for salt bath, plasma and traditional gas nitriding. A leading technology of choice, Nitreg® enhances the performance of applications in diverse industries such as aerospace, automotive, tooling and die, machinery, gears, mining and more.

**No skills required:** The technology empowers users with the ability to obtain predictable, uniform case properties that are repeatedly exact load-for-load and that are tailored to the requirements of the application and material. It offers the right mix of performance, operating flexibility, ease and economy, while being ecology-friendly.



PROPERTIES / FEATURES	NITREG® Controlled Nitriding	Conventional Gas	Salt Bath	Plasma (Ion)
Cleaning (Before)	Clean	Clean	Relatively Clean	Very Clean
Cleaning (After)	Not required	Not required	Strongly Required	Not Required
Heating Time	Short	Short	Very Short	Long
Positioning of Parts	Simple	Simple	Simple	Very Complex / Requires Skill & Experience
Nitriding of Stainless Steel	Possible	Not Possible	Possible	Possible
Operation of Equipment	Very Simple / Fully Automated	Relatively Simple	Simple	Very Complex / Requires Advanced Skills
Temperature Control & Uniformity	Excellent	Good	Good	Difficult / Insufficient / Overheat Possible
Control of Nitriding Potential	Yes	No	No	No
Control of % of ε and γ'	Possible	No	No	Possible
Nitriding with No White Layer	Possible	No	No	Possible
Porosity Control	Possible	No	No	Possible
Repeatability of Results	Excellent (regardless of load)	Possible (repetitive loads only)	Possible (repetitive loads only)	Possible (repetitive loads only)
Equipment Maintenance	Simple	Relatively Complex	Complex	Very Complex
Degree of Pollution	Very Low	High	Extremely High	Very Low