



DYNAMIC
SURFACE TECHNOLOGIES

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Increase your "return on investment"
by increasing Tool Life up to 10 times
longer than gas/ion nitride or chrome
with **DYNA-BLUE®**



COST EFFECTIVE - WEAR & CORROSION RESISTANCE
REDUCE TOOL, DIE AND MOLD COSTS BY 50% OR MORE

DYNA-BLUE® is a low temperature (900 – 1200 °F) combination process incorporating fluidized bed Ferritic Nitrocarburizing and a Blue Oxide process. A compound layer with hardness Vickers up to 1880 (75+ Rockwell "C") supported by a diffusion zone is produced in the base material. The surface has a blue oxide layer that resists corrosion and will assist in die lubricant retention and wear resistance.

DYNA-BLUE® resists erosion and abrasion 2–10 times longer than ion/gas nitriding, chrome and/or nickel plating in most environments where heat, molten metals, plastic and wear effect the Tool Life. The process prevents these materials from attacking the base material. When test coupons were subjected to a salt and humidity chamber and tested per ASTM B-117, **DYNA-BLUE®** performed better than stainless steel for corrosion resistance. **NITROWEAR® M** (a combination of **DYNA-BLUE®** with a proprietary dry film lubricant) has demonstrated up to 1000 hours of corrosion resistance.

Call us today for a "free trial run" to dramatically reduce downtime, maintenance, and increase part quality and tool performance with

DYNA-BLUE®

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BENEFITS

- RESISTS HEAT CHECKING, SOLDERING & WASHOUT (DIE CASTING DIES)
- RESISTS ATTACK FROM HARSH CHEMICALS, ALUMINUM, MAGNESIUM, ZINC
- DECREASES THERMAL FATIGUE
- HIGH WEAR AND CORROSION RESISTANCE
- CO-EFFICIENT OF FRICTION AS LOW AS .03
- LOW DIMENSIONAL VARIATION (1µM - 5µM)₍₁₎
- ANTI-GALLING & ANTI-STICKING PROPERTIES
- MAINTAINS EXCELLENT MICROFINISHES
- BETTER WELDABILITY THAN ION/ GAS NITRIDE
- ENHANCE PARTING LINE DURABILITY (PLASTIC INJECTION MOLDS)
- CAPACITY 42" X 134" UP TO 10 TONS
- NEW FURNACE: 77" X 100"
- NORTH AMERICAN DIE CAST ASSOCIATION SAYS "MOST COST EFFECTIVE PROCESS". "THE BENCHMARK"
- ISO 9001:2000 ACCREDITED, EAGLE REGISTRARS 
- TIER 1 SUPPLIER
- APPROVED BY AEROSPACE AND FDA
- MEETS GM, FORD & DAIMLER CHRYSLER SPECIFICATIONS

INCOMING MATERIAL REQUIREMENTS

Materials: All ferrous metals such as P-20, all H-series, A-series, D-series, S-series, M-series, stainless steels, cast irons, low, medium and micro alloyed steels are suitable for **DYNA-BLUE®**. **High hard P-20 must be noted on incoming paperwork as a special cycle is required.**

Pre-heat Treatments: To insure dimensional stability, it is recommended that the die or component be tempered or stress relieved at 975 ° F or higher. Talk to a DMT Account Manager about your application requirements.

Surface Condition: Parts or components submitted for **DYNA-BLUE®** should be finished machined and ready to be put into service. Dies or molds should be free of aluminum, rust, burrs, grinding burns, glue, paint, plating, non-water soluble oils, etc.

****Gloss levels and surface finish requirements should be specified as well as previous tool history, such as welding, etc. Non-Water Soluble Oils must be noted on incoming paperwork and accompanied by an MSDS. High gloss levels and Class A surface finish may require a pre and post polishing operation.**