

## TRU NITRO 22

### NITROGEN-ENHANCED DUPLEX STAINLESS STEEL ALLOY

**TRU NITRO 22** Plate (ASTM A240) is produced with a 0.15% minimum Nitrogen content provides good aqueous corrosion and pitting resistance combined with resistance to abrasives, metal-to-metal wear and impact resistance through higher minimum Chrome, Moly and Nickel contents. Higher mechanical properties than standard austenitic grades. Outstanding corrosive wear resistance under many different sliding conditions. Corrosion resistance equivalent to or better than types 316 or 317 with a yield strength that is more than double that of conventional austenitic stainless steels. Due to its high iron content, **TRU NITRO 22** is magnetic (ferromagnetic) in nature.

### PHYSICAL PROPERTIES

Tensile Strength	<b>110 ksi min</b>	Yield Strength	<b>75 ksi min</b>
Elongation in 2"	<b>35% min</b>	Hardness	<b>290 Bhn max</b>
Modulus of Elasticity	<b>0.275</b>	Rockwell "C"	<b>30 max</b>

### CHEMICAL PROPERTIES

Carbon	<b>0.030 max</b>	Chromium	<b>21.00 min / 23.00 max</b>
Manganese	<b>2.0 max</b>	Nickel	<b>4.50 min / 6.50 max</b>
Silicon	<b>1.00 max</b>	Nitrogen	<b>0.08 min / 0.20 max</b>
Molybdenum	<b>2.5 min / 3.5 max</b>	Iron	<b>Balance</b>
Sulfur	<b>0.020 max</b>	Phosphorus	<b>0.030 max</b>

### WELDING AND FORMING

**TRU NITRO 22** is designed to contain approximately equal amounts of ferrite and austenite in annealed plate products. Therefore it is recommended to use matching filler metals such as AWS E2209. A fully ferritic weld should be avoided.

**TRU NITRO 22** can be successfully cold-bent and expanded. Greater loads will be required to deform the material because of its higher strength in comparison to other austenitic and wear materials. Stress relief heat treatments adversely affect the properties of the **TRU NITRO 22** and should not be considered.

### APPLICATIONS

- Coal handling equipment-screens, chute liners, buckets and hopper cars.
- Water supply, Sewage treatment plant and control structures.
- Mixing tanks.
- Wear plates, now using less cost-effective materials such as abrasion resistant steels AR400, 500 and/or 316 & 317 stainless steels.
- Shipboard containers.