TRU STEEL METALS LLC

TRU NITRO 30

NITROGEN-STRENGTHENED AUSTENITIC STAINLESS STEEL

TRU NITRO 30 provides good aqueous corrosion resistance combined with resistance to abrasives, metal-to-metal wear and impact resistance. Higher mechanical properties than standard austenitic grades. Outstanding corrosive wear resistance under many different sliding conditions. Galling resistance equivalent to or better than 304 stainless steel.

GENERAL PROPERTIES

TRU NITRO 30 has annealed mechanical properties, which are well above those of typical austenitic grades such as 304. This higher strength affords the opportunity to reduce thickness or equivalent engineering loads. Galling resistance of **TRU NITRO 30** is approximately equal to 304. It work hardens rapidly while retaining good ductility. Unlike other nitrogen-strengthened stainless steels, **TRU NITRO 30** is subject to magnetic transformation when cold worked. It is more cost effective than 409 and 304 stainless steels, which are typically used in wear-abrasive applications, while showing better wear characteristics than abrasion steels such as AR 400.

PHYSICAL PROPERTIES

Tensile Strength	**95, ksi min**	Yield Strength	**48 ksi min**
Elongation in 2”	**35% min**	Hardness	**241 Bhn max**
Modulus of Elasticity	**0.284**	Rockwell “B”	**100 max**
Density	**7.86 g/cm^3**		

CHEMICAL PROPERTIES

Carbon	**0.030 max**	Chromium	**15.00 min / 17.00 max**
Manganese	**15.00 min / 17.00 max**	Nickel	**1.50 min / 3.00 max**
Silicon	**1.00 max**	Nitrogen	**0.15 min / 0.30 max**
Sulfur	**0.030 max**	Phosphorus	**0.040 max**

APPLICATIONS

- Coal handling equipment-screens, chute liners, buckets and hopper cars.
- Water supply and control structures.
- Sewage treatment plant structures.
- Mining equipment – magnetic ore separator screens.
- Bulk solids handling equipment – conveyor parts.
- Mixing tanks.
- Wear plates, now using less cost-effective materials such as abrasion resistant steels AR400, 500 and/or 409 & 304 stainless steels.
- Transport and vibratory equipment where fatigue resistance is a major design criteria.
- Shipboard containers.

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