

Oil and Gas

Localised corrosion results from breakdown of the steel's passive surface layer and manifests itself as crevice or pitting attack. Resistance is improved with additions of Cr, Mo and N₂. Damage is more likely with increasing salinity, pH and temperature.

Pitting Resistance Equivalent (PRE) is a mathematically calculated measure of resistance to pitting and crevice corrosion given by the formula $PRE_N = \%Cr + 3.3\% Mo + 16\% N_2$.

Table 1

| PRE - Pitting Resistance Equivalent | |
|-------------------------------------|------------------|
| Material | PRE _N |
| VISTAR® | 47 |
| CK3CuMn | 43 |
| 25% Cr Duplex | 42.2 |
| 904 L | 36 |
| 22% Cr Duplex | 34.5 |
| 316 L | 25.2 |

Tables 1, 2 and 3 illustrate the superiority of VISTAR® in seawater, formation and oil field produced waters.

VISTAR® with a typical PRE value of 47 outperforms traditional Austenitic and Duplex Stainless Steels and will outperform some of the less alloyed nickel alloys in chlorinated and acid oxidising conditions.

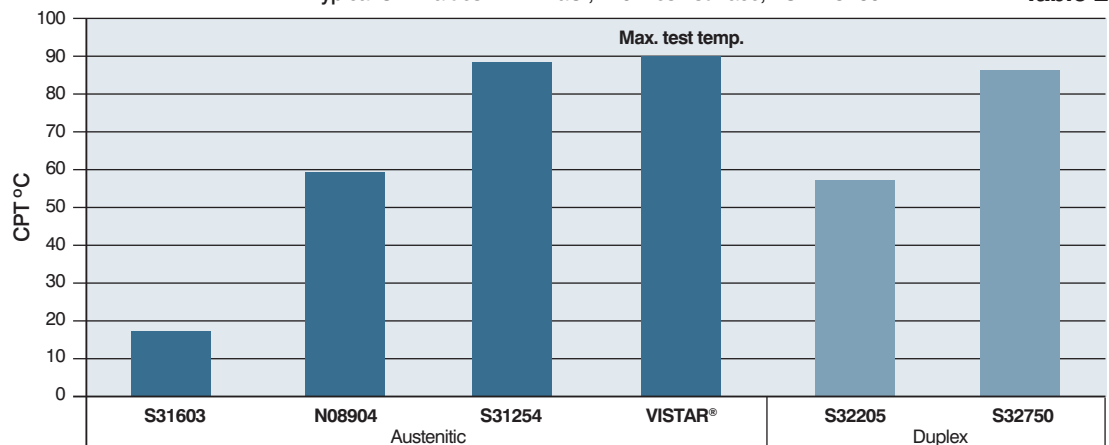
Technical Data



VISTAR

Typical CPT values in 1M NaCl, 120 mesh surface, ASTM G150

Table 2



Typical CCT values, 6% FeCl₃ + 1% HCl, 120 mesh surface, ASTM G48(F)

Table 3

