Chloride Stress Corrosion
(Offshore, Produced Waters, De-Salination)

In the drop evaporation method, tensile specimens are increasingly loaded, in 10% increments, until the yield stress is reached. Simultaneously, a solution of 0.1M NaCl is dripped on to the specimen, the timing such that the previous drop has just evaporated when the next one hits. The test temperature was 170 ºC; the test is complete when failure occurs or 500 hours elapses without failure (tests in duplicate).

VISTAR® performs well in this test showing at least the same resistance as CK3MCuN (254 SMo®) when loaded with twice the applied stress.

Technical Data

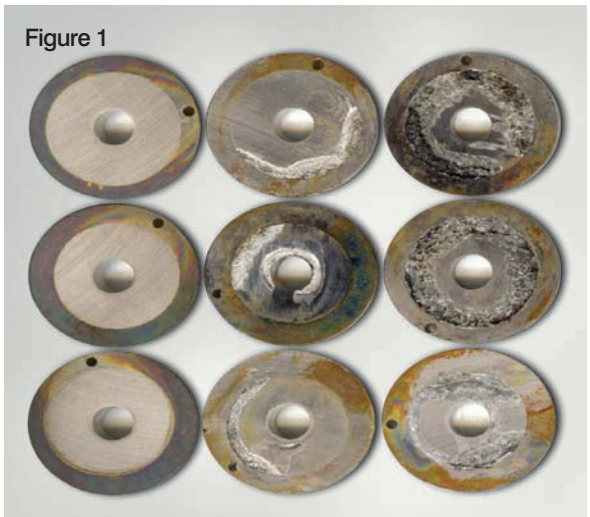
VISTAR

Stress Corrosion Cracking
Resistance Drop Evaluation Test 170 ºC

Material	MPa Applied Stress	% Yield	Time to Failure
VISTAR®	450	100	>500>500
CK3MCuN (254 SMo®)	220	90	>500>500
904 L	150	70	>500>500
316 L	205	10	155, 158

Figure 1 illustrates the corrosion resistance of VISTAR® to high temperature crevice corrosion from simulated seawater tests.

Figure 1



VISTAR®	A351-6% Mo	A995 S Duplex

VISTAR® after 3 years operating in salt slurry

NV0610

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