Why Use Weld Inset Rings When Welding MaxCore 6MO?

***Max*Core 6Mo orbital welded to *Max*Core 6Mo with no weld insert**

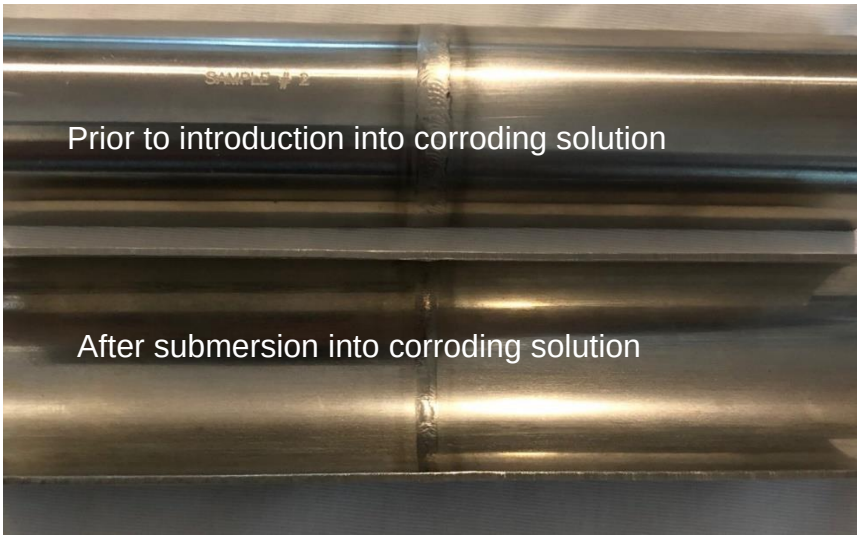
Because of two words: ***Intergranular Corrosion*.**

6 Moly alloys are susceptible to chemical segregation in the weld area and therefore subject to preferential corrosion attack in corrosive environments. To compensate and offset the segregation of the molybdenum within the heat-affected zone of field welds, insert rings are used to over-alloy the area adding molybdenum and nickel into the weld area.

6 Moly Alloys are classified as a single-phase alloy. When it is melted, as in welding, it will solidify as a three-phase alloy: austenite, chi phase and delta ferrite. Chi phase is a chromium-iron-molybdenum intermetallic compound which depletes the grain boundary of molybdenum and chromium, leaving areas of delta ferrite in the grain boundaries which has poor corrosion resistance.

By over alloying welds using weld insert rings, the alloy balance, and therefore corrosion resistance, of the weld is equal to or better than the base alloy.
Corrosion and welding studies performed by independent laboratories, have shown the best results have been obtained by using flat washer style insert rings fabricated from Alloy 22 material.

The materials shown were orbital welded together with no weld filler then put into a ASTM G-48 Practice C (modified immersion test) solution of 6%$FeCl_3$ + 1% HCl at 50° C (122° F) for 72 hours.



***Max*Core 6Mo orbital welded to *Max*Core 6Mo using Alloy 22 weld insert**

Look to ***Max*Core** Products for your next solution!

Call your local VNE Distributor for a quote.