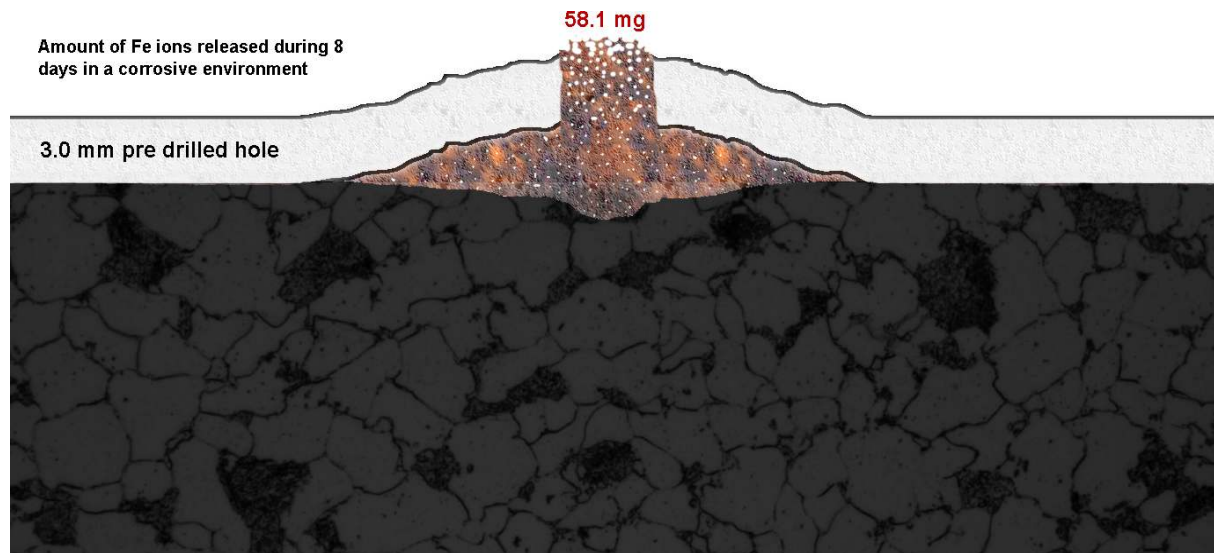
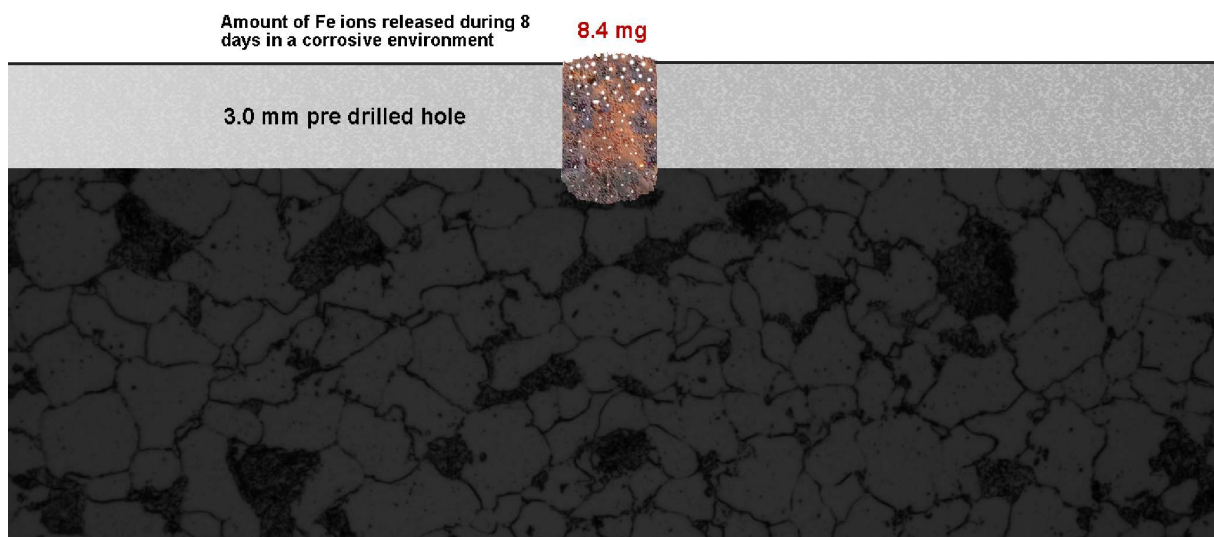




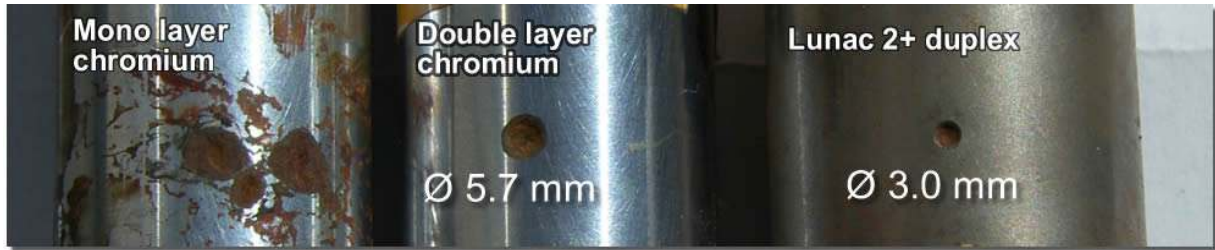
The effect of stress-free and electro-chemical near-to-neutral coatings on the corrosion behaviour of surface defects



The amount of Fe-ions being released from a drilled hole in chromium (nickel) coated S355J2 carbon steel in 1L, 4% NaCl water (40°C at PH 3.5 after 8 days). A typical sub-surface corrosion progression beneath the chromium (nickel) coating on carbon steel is observed. This sub-surface corrosion causes raised sharp edges and consequently evokes seal damage.



The amount of Fe-ions being released from a drilled hole in Lunac 2+ (duplex) coated S355J2 carbon steel in 1L, 4% NaCl water (40°C at PH 3.5 after 8 days). No significant sub-surface corrosion is observed and consequently no raised sharp edges emerge.



The actual appearance of the tested rods after the 8-days sub-surface corrosion test. The originally 3.0 mm hole in the chromium plated rod has widened to 5.7 mm during this time.



A chromium plated carbon steel cylinder after 27 months (left) in a marine environment clearly displays the sub-surface corrosion effect. The Lunac 2+ duplex coating (below, 23 months, similar conditions) will block sub-surface corrosion if a surface defect would be present.

