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## **Susceptibility of 304 stainless steel to crevice corrosion in Electrochemically Active Fluids**

The generation of active disinfectants by electrochemical processes gains market share due to the lack of need for transportation and storage of dangerous goods as well as the ease of operation. Usually, the process involves the use of specific electrodes for electrolysis of water to produce active chlorine species, sometimes supported by the addition of chlorides to the process water. Thus, the influence on the corrosion behavior can vary widely.

The susceptibility of 304 stainless steel to crevice corrosion on the effect of contact with electrochemically active fluids was investigated using exposure and stepwise potentiostatic polarisation. Two kinds of crevices including 304 SS-to-PEEK and 304 SS-to-304 SS were tested. The combination of the influence of oxidant and chloride concentration were examined in detail. The corroded surface morphology was investigated using scanning electron microscope (SEM), Energy Dispersive X-ray (EDX) and Confocal microscope.