

Localized corrosion of stainless steel triggered by typical inclusions in NaCl solution: MnS and mixed oxide/sulfide inclusion

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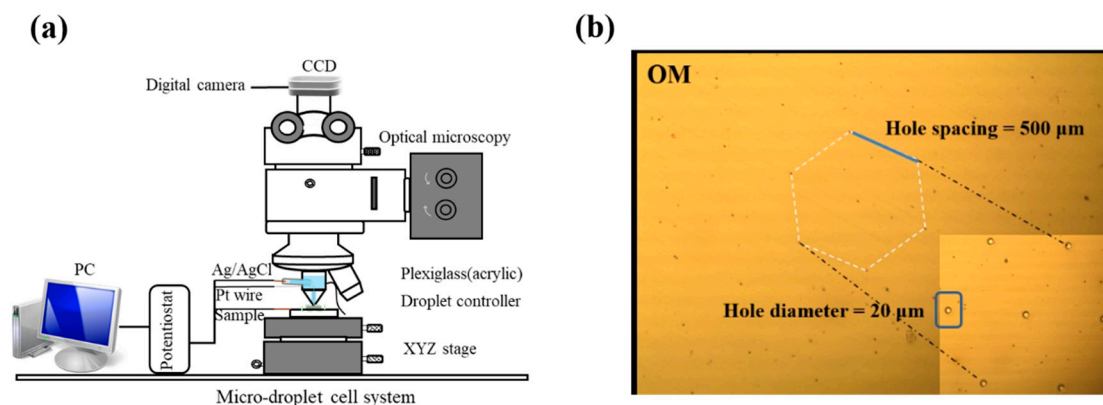


Figure S1. (a) Schematic diagram of home-made microelectrochemical test system, (b) sample coated with photoresist with a thickness of about 2.5 μm .

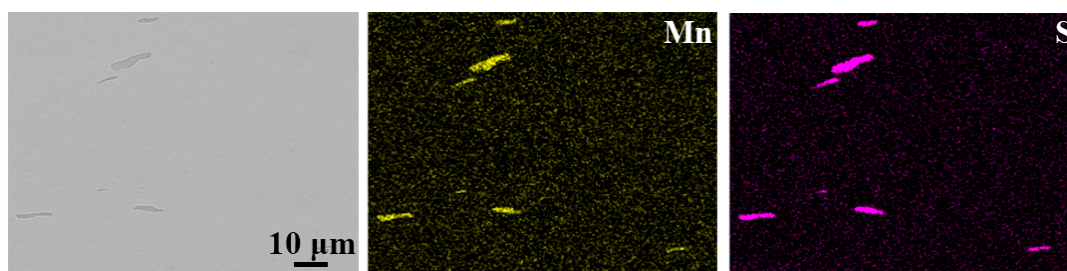


Figure S2. Rod-shaped MnS inclusions formed in the samples.

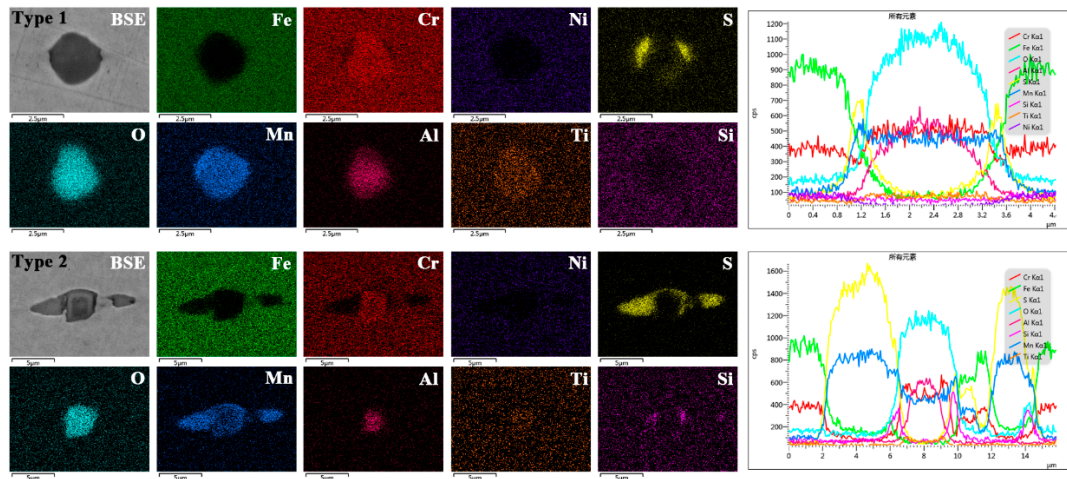


Figure S3. EDS results of two types of oxy-sulfide inclusions. Type 1: polygonal oxide wrapped by rounded sulfide; Type 2: polygonal oxide embedded in rod-shaped sulfide.

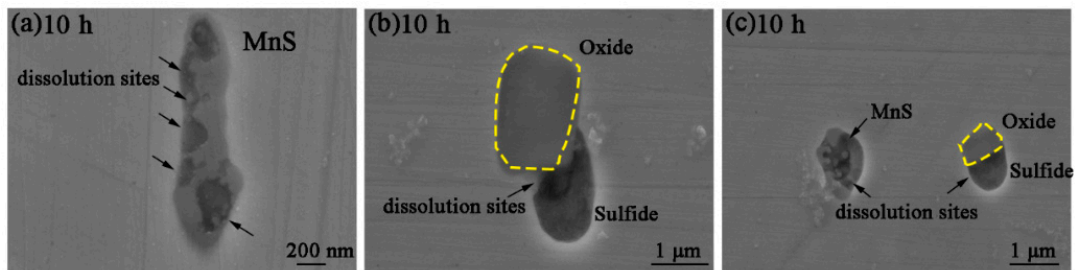


Figure S4. (a) The MnS always starts to dissolve from the edge areas; (b) The sulfide parts in mixed oxide/sulfide inclusions tend to dissolve preferentially from the boundary between the oxide parts and sulfide parts; (c) Corrosion morphology of two inclusions in the same field of view