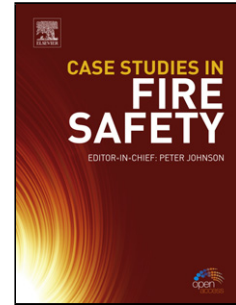


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Corrosion of $\text{Al}_x\text{CoCrFeNi}$ high-entropy alloys: Al-content and potential scan-rate dependent pitting behavior.

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Highlights

- $\text{Al}_x\text{CoCrFeNi}$ high entropy alloys present superior corrosion-preventive ability.
- Increased Al-content in $\text{Al}_x\text{CoCrFeNi}$ alloys degrades localized corrosion resistance.
- Pitting behavior is influenced by passive film properties and migration of Cl^- ions.
- Mean field theory can predict the distribution of current fluctuations.

Abstract

The present work investigates the influence of Al-content and potential-scan-rate on stable/metastable pitting of $\text{Al}_x\text{CoCrFeNi}$ high-entropy alloys in a 3.5 wt.% NaCl solution.

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