

Aluminium Alloy AA6060 surface treatment with high temperature steam containing chemical additives - DTU Orbit (08/11/2017)

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The steam treatment process was employed to produce a conversion coating on aluminium alloy AA6060. The changes in microstructure and its effect on corrosion resistance properties were investigated. Various concentrations of KMnO_4 containing $\text{Ce}(\text{NO}_3)_3$ was injected into the steam and its effect on the formation of steam-based conversion coating was evaluated. The use of Mn-Ce into the steam resulted in incorporation of these species into the conversion coating, which resulted in improved corrosion resistance of the alloy substrate.

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