Short Communication

Effect of phosphoric acid and perchloric acid on Electropolishing of additive manufactured 17-4 PH stainless steel and its characterization

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Additive manufactured 17-4 PH stainless steel is widely used and is the material for this study. The processing of the work piece for additive manufacturing is difficult and the surface is very rough. The surface roughness is reduced by electropolishing using phosphoric acid and perchloric acid solutions, in order to compare their efficiency. Surface morphology is determined using SEM. A 3D white light interferometer measures the surface roughness and electrochemical testing is used to determine corrosion resistance after electropolishing.

Keywords: Electropolishing; Additive Manufacturing; 17-4 PH stainless steel; Surface roughness

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