

Molecular Hydrogen Tracking in an Electrolytic Polishing Process

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Abstract

In a water based electrolytic polishing process, the formation of molecular hydrogen at the cathode is unavoidable and it can contribute to the formation of surface defects at the anode side. This paper presents the work to model and simulate the molecular hydrogen flow inside radio frequency geometries and compares it with the presence, type and relative position of certain defects in real radio frequency components that went through this electrolytic polishing process. Geometry and flow optimization hints to reduce molecular hydrogen induced surface defects are also presented.