

Modeling approaches to vacuum arc plasmas

Thursday 7 November 2013 09:00 (30 minutes)

We will present the state of the art modeling approach to describe the plasma (primarily interelectrode) of the vacuum arc. The model is based on the free boundary plasma expansion. The character of the plasma expansion depends on the anode geometries (disk anode, ring anode, and small anode relatively to the expanding plasma). Peculiarities of the high-current vacuum arc will be discussed. Several effects associated with high-current arc such as behavior in a magnetic field and transition from diffusion to constricted arc will be discussed. New applications of the vacuum arc will be discussed as well.

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Session Classification: Theory and Simulation 2 - Plasma