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Operation Parameters of The Thermionic Vacuum Arc Discharge

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Abstract: The thermionic vacuum arc (TVA) discharge with evaporating anodes employing directly heated thermionic cathodes is investigated. The TVA discharge generates a pure, gas-free metal vapor plasma containing ions with a directed energy. The TVA is strongly controlled by the cathodic electron beam and there is a quite good stability of important operation parameters like the arc voltage and the arc current.

Key Words: Copper, discharge, plasma processing, vacuum arc

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