

# Model on Sputter Erosion of Electrical Contact Material

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*Abstract*-The sputter erosion of arcing contacts is a very complex phenomenon, which is determined by the interaction between electromagnetic force, heat conduction and metallic of discreteness and randomness, and a new model for evaluating the sputter erosion of electrode is described for the first time, which is based on the electromagnetic forces against molten pool, flowing velocity, kinetic energy and the surface tension of the molten pool. The simulation results are presented, which theoretically show how the current and density, specific heat and other parameters of material affect the erosion rate.

*Index terms*-Electrical contact, erosion, sputter Model, material.