

GAS DYNAMIC PROCESSES IN ELECTRIC  
ARCS INDUCED BY PRODUCTIONS  
OF EROSION OF ELECTRODES

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S u m m a r y

Characteristic properties of extension of electrode material in a free-burning electric arc as well as the forming of attributed pressure gradients are investigated. It is shown that this extension may be accompanied by shock waves both in the near-electrode spots and at the periphery of the electric arc channel in the case of high currents. Adequate determination of dynamic properties of electric arc plasma calls for sequential reference to heat conductivity in the near-channel region of the arc. The roles of gas dynamic and diffusion processes as the mechanisms of rejection of erosion products are compared.