

MECHANISMS  
OF THE CONTRACTION OF AN ARC DISCHARGE.  
1. PECULIARITIES OF THERMAL CONTRACTION

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S u m m a r y

The influence of properties of a gaseous medium on the processes of contraction (self-constriction) of an arc discharge in the atmosphere of inert gases is theoretically considered. The calculations are carried out, and it is shown that the degree of constriction of an arc discharge is determined by both the thermophysical characteristics of the gaseous medium and the characteristics of electron-atom collisions. It is revealed that the Ramsauer effect has an influence on a character of the contraction of an arc discharge.