

MECHANISMS OF THE CONTRACTION
OF AN ARC DISCHARGE 3. PECULIARITIES
OF THE THERMAL CONTRACTION
OF AN ARC IN A MOLECULAR GAS

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S u m m a r y

We consider the influence of properties of a gaseous medium on the processes of contraction (self-constriction) of an arc discharge in the atmosphere of hydrogen, the mixture of hydrogen and copper, and water vapor. The calculations show that the degree of constriction of an arc discharge is determined by both the thermophysical characteristics of the gaseous medium and the effective characteristics of electron-neutral particle and ion-atom collisions. The similarity of the contraction of an arc in both the hydrogen and water vapor media is shown.