

## **PLASMA PARAMETERS OF PULSED PLANAR MAGNETRON DISCHARGE WITH ELECTRON INJECTION FROM VACUUM ARC\***

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A discharge system based on a planar magnetron with a central electron injection from a vacuum-arc discharge plasma is studied in detail. The experiments were carried out on a copper target. The operating pressure varied in the range of 0.5-3 mTorr. The pulse current of the magnetron discharge was 10-30 A (50÷250  $\mu$ s). The change in the ratio of gas and metal ions in the magnetron plasma is shown depending of supplying the working gas and the type of discharge used as an electron emitter. The effect of the electron injection and a reflector electrode on the radial uniformity of the magnetron plasma is investigated. The excitation conditions of rotational inhomogeneity in the magnetron's racetrack region and its linear velocity are determined. The electron temperature was measured depending on the operation mode of magnetron discharge.

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