

Abstract Submitted
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Plasma-liquid system with rotational gliding arc with liquid electrode OLEG NEDYBALIUK, VALERIY CHERNYAK, EUGENE MARTYSH, Taras Shevchenko National University of Kyiv, NATALIA BELENOK, National Technical University of Ukraine “Kyiv Polytechnic Institute”, TAMARA LISITCHENKO, Taras Shevchenko National University of Kyiv — Atmospheric pressure plasmas can be created by various types of discharges: transverse arc; discharge in gas channel with liquid wall and others. But most of them aren't sufficiently stable. Stabilization of discharge in the high pressure powerful plasmatron is attained by vortex flow of gas. In the low-powered high pressure discharges the reverse vortex flow “tornado” type can be used for the space stabilization. The voltage-current characteristics of discharge at the different regimes are measured. Typical emission spectra of plasma in plasma-liquid system with rotational gliding arc were measured. The population temperatures of excited electronic, vibrational, rotational levels and the flame temperature are determined.

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