

# **EMERGENCE OF PLASMA-ELECTROLYTE VORTICES ON THE BOUNDARY BETWEEN ELECTROLYTE JET AND A SOLID BODY AT LOW PRESSURES**

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Many experimental and theoretic investigations show that some discharges (for example dielectric barrier discharge) create vortices in gas [1 – 2] due to a spatial discharge gradient interacting with electric field.

This work presents the results of experimental investigation of plasma-electrolyte vortices on the boundary between an electrolyte jet and a solid body in the pressure range 7.6 – 608 Torr, electrolyte flow rate 4.5 g/s, jet length 35 mm, jet diameter 3 – 4 mm. Saturated water solution of NaCl was used as an electrolyte. The process was registered by digital camera «Panasonic» DMC – FZ90 and video camera «Sony» HDR – SR72F.

The glow discharge burns along the jet electrolyte cathode. The jet is surrounded by a blue colored negative glow. A weakly glowing region is observed near the metal anode, there being solid anode spot on the surface. The glow discharge has a conical shape embracing the jet. A diffuse glow discharge is observed on the end of the jet. With the pressure increase from 7.6 to 304 Torr the vortices are observed at the end of the jet.

## **References**

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