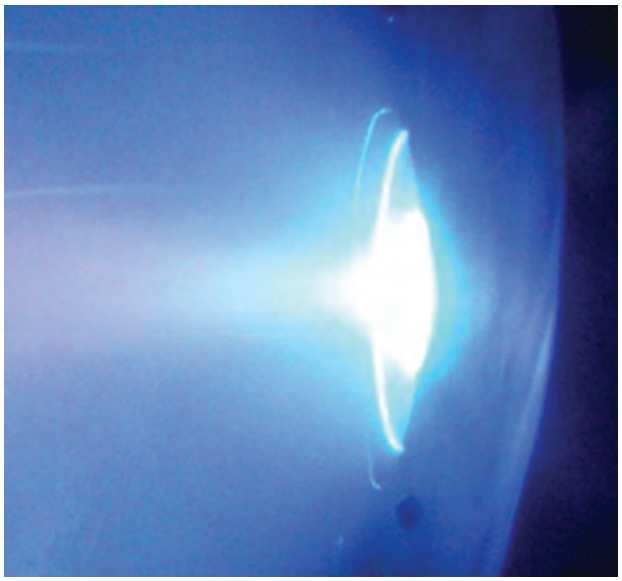
COMBINED TECHNOLOGY FOR EXTENDING THE SERVICE LIFE OF FRICTION COUPLES



Unbalanced planar magnetron

Autonomous ion source

Areas of Application

The technology is designed to modify service properties of outer and inner work surfaces of reciprocating and revolving friction couples to improve their strength, tribological properties, wear and corrosion resistance in the course of manufacture and repair

Advantages

Enables treating of hard-to-access inner surfaces and performing all process steps within a single vacuum cycle; simplified manufacture, lower cost and operating expenses as compared with similar technologies based on vacuum arc devices

IPR Protection

IPR3

Specification

Enables to treat parts with a diameter over 25 mm. The technology consists of several process steps to be performed in vacuum chamber during a single vacuum cycle, in particular, ion-beam etching and polishing of work surfaces to remove the strain stressed layer and to reach optimal abrasiveness; ion-plasma (or ion-current) nitrogen hardening of work surface for adhesion to the functional coating layer, and application of respective coating

Stage of Development. Suggestions for Commercialization

IRL4, TRL4
Technology; treatment of surfaces of any configurations

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