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. . . , 15, 49005, . . . ; e-mail: Gryshkevych.O.D@nas.gov.ua

The aim of this work is to develop plasma process devices and combinations thereof for the use in a process plant for the implementation of a combined process of metal parts working surface strengthening. All the component parts of the process plant meet progressivity criteria and can be mounted in the working chamber of a standard vacuum plant. Consideration is given to the features of the design and operation of plasma process devices constructed with the use of physical effects of the interaction of concentrated energy fluxes with the surface under treatment. To conduct ion-beam and ion-plasma treatment of the outer and inner surfaces of parts, several models of self-contained ion sources and magnetron sputtering systems have been developed, made, and tested. Consideration is given to the features of the functioning and destination of different construction arrangements of a vacuum-plasma plant for treatment of variously shaped parts. Recommendations are formulated on the choice of the optimum composition of process devices and construction arrangements of the vacuum-plasma plant for combined treatment of parts with inner and outer working surfaces.

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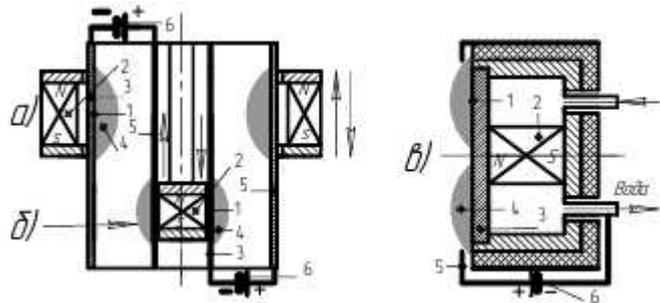
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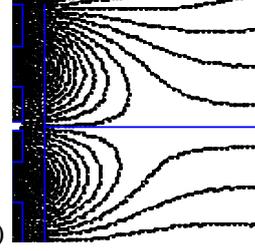
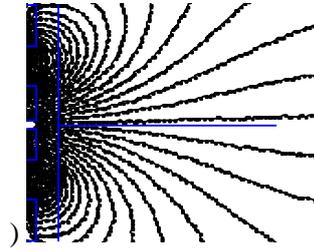
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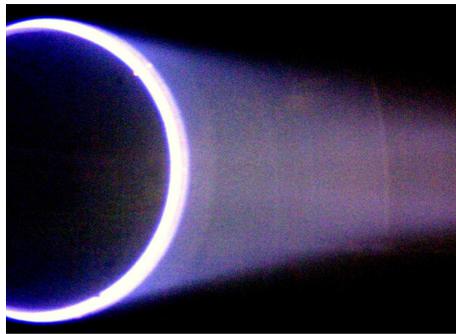
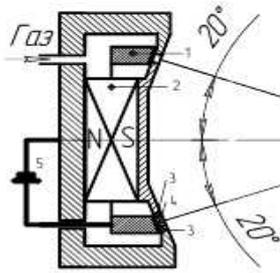
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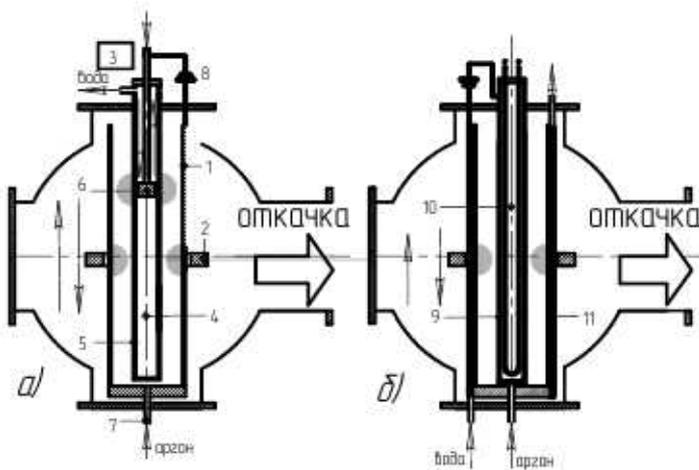
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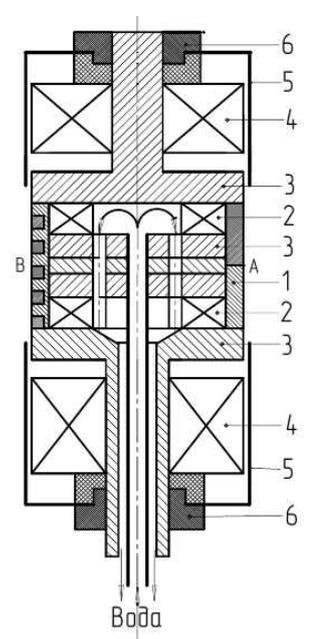
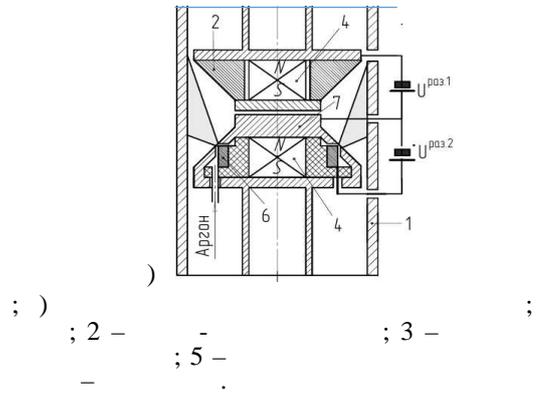
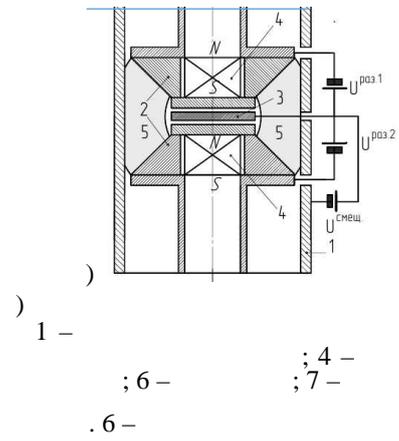
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