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Improving the efficiency of plasma heat treatment of metals

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Abstract

This paper proposes an effective way of the plasma hardening the surface layer at the expense combined influence of the plasma jet and a cold air flow. After that influence occurs a distinctive by plasma treatment microstructure with increased microhardness (an increase of 35%) and depth. There is proposed an improved design of the vortex tube for receiving the air flow with a temperature of 20 C to - 120C.

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