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The invention relates to the mechanical engineering, namely to a process and a device for working of metal surfaces and may be applied for place hardening by plastic superficial deformation with concomitant application of coats of powdered materials at pulse discharge in magnetofluidized layer.

The process includes working of the metal surface in an external magnetic field with a mixture of cylindrical ferromagnetic particles and powdered material. At the contact of ferromagnetic particles with the electrodes there are formed some short microcircuits. Getting into the electric charge arc the powered material is melted and deposited onto the piece surface. Concomitantly, at the collision with the formed coating, the ferromagnetic particles produce the plastic deformation thereof.

The device for realization of the claimed process includes a chamber, which in the upper part is limited by a cover, in the lower part of which there is an electrode (anode) in the form of a metal reglet. Into the lower part of the chamber there is mounted a gasket providing for the hermetic sealing of the piece surface (cathode). Inside the chamber there are placed some ferromagnetic particles and a powdered material, and outside the chamber is winded by some electromagnetic bobbins. Between the chamber and the piece there is a magnetic core which, according to the piece form, is completed with a ferromagnetic gasket.

The result consists in enlarging the possibilities of local working of pieces with different forms and surfaces.

Claims: 2
Fig.: 5