

TECHNOLOGY FOR TITANIUM ALLOY SURFACE HARDENING



Areas of Application

The technology is designed to improve tribotechnical properties and corrosion resistance of titanium alloy friction couples operating under bearing pressure up to 10 MPa, particularly, in aggressive environments. It can be used in machine building, aviation engineering, aerospace industry, and medicine for treating surgical instruments, brackets, and shafts for curing bone fractures, as well as other products operating under bearing pressure and in corrosive environments

Stage of Development. Suggestions for Commercialization

IRL7, TRL8
Diffusion saturation works using our equipment under services contract or technology transfer based on license agreement; consultancy support

Specification

The technology is based on diffusion saturation of surface layers with nitrogen

Advantages

The technology provides a high wear and corrosion resistance due to the formed complex solid-solution areas with a depth up to 100 – 200 μm ; ensures mechanical strength properties and enhances plasticity; ensures a high quality of surface (used as final process operation); enables treating the articles of arbitrary shape, including those with bores of arbitrary diameter and length, with the use of serial vacuum electric furnaces and commercially pure nitrogen

IPR Protection

IPR2, IPR3

Contact Information

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