

UDC: 620.178.16 (045)

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*National Aviation University, Kyiv***STEEL 2 WEARPROOFNESS IN TREATED BY THE MAGNETIC FIELD LUBRICATING ENVIRONMENTS**

Machines and mechanisms, during the exploitations, lose the working capacity, wear is one of the main reasons, which negatively influences on friction pairs work.

There are many methods of friction knots renewal: plasma, galvanic, detonation, electrochemical. In the given work the method of friction surface renewal with the help of magnetic field influence on the working environment is considered.

Precision triboobjects (plunger, gear pumps) service term increasing, an economy of lubricating materials is an important technical task. One of the basic factors here is tribopair wearproofness, depending not only on friction surfaces metal and physical characteristics, but also on lubricating material properties.

In the physical and chemical conditions of lubricating material and metal friction surface co-operating one of the ways of tribopairs service term increasing and movable wearied friction surfaces renewal is tribomodifications of friction surfaces by the creating of the metal tapes with the help of lubricating material treated by the magnetic field using as the work environment.

Lubricating materials treated by the magnetic field have high level of antifrictional and antiwear properties, that is why they are used for lubricating of magnetic bearing, gearings with the magnetic system of greasing production.

That is why it is actual to use as the working environment, during the friction process, lubricating material treated by the magnetic field

Scientific novelty and the basic idea of researches: lubricating material state changing by the magnetic field energy is the new method of friction surfaces tribological parameters optimization. For the researches such objects are chosen: power objects: magnetic field influence on the lubricating material (permanent magnet with the ability of magnetic induction power changing and magnetic field direction); physical objects: steel 2 cylindrical specimen with 3 mm diameter, glass (model rider), work environment – motor oil M10Г2к, syntactical oil 5w40, surface-active material PEG-400 (75% solution with the water). Magnets provide permanent, even magnetic field, which influences on working environment besides friction zone.

Working environment was under the action of permanent magnetic field different directions with induction value 0,15-0,3Tl, this fact considerably increased ferromagnetic wearproofness.

During the experiments magnetic field influence on the lubricating material modification additives and steel tribological parameters in treated by the magnetic field lubricating environments is determined.

It is set that the most intensive renewal of friction surfaces is in lubricating environment treated by the permanent magnetic field, it allows considerably arise aggregates resource indexes.

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