UDC: 620.193.91 (043.2)

Kazarinov S.
National Aviation University, Kyiv

TRIBOMAGNETIC RECOVERY BY HADO-ADDITIVES

Now in all branches of the technical industry, there was the critical situation related to "ageing" of machinery due to wearing triboobjects (plunger, gear-type pumps).

For the solution of the developed problem it is necessary to select correct materials, operating environment and to optimize service conditions that is actual economical problem for supporting of engineering durability resource.

It follows that the most perspective for wear resistance increase are the directions that related to effect of reduction processes.

All antifrictional and anti-wear additive in grease oil are divided on: antiwear, corrosion, etc. the Soft metals (molybdenum, tin, copper, argentum, etc.) can be imported to a friction zone: in the molecular and fine-grained view, due to chemical reaction of grease oil elements, but it is related to a relation problem between permissible concentration of such metals in circulating oil and their amount, sufficient on resource of grease oil.

Conceptually differents by character of action are the additive based on natural associations of silicate minerals. This additive compounds (friction geomodifiers), falling into the friction zone, makes such structural changes in friction surface, which can modify it in the desired direction.

Scientific novelty and the basic idea of researches: influence of hado-additives on triboprocess under the influence of the magnetic field.

Research work on durability performed by scheme of a plane-finger contact. Basic load on an exemplar was 0,5 kg, and velocity - 0,1 m/s. . A permanent magnet is placed in such way that the magnetic field crossed perpendicularly to the friction zone.

8The results showed that the maximum recovery for the friction surface using HADO additive and influence of the constant magnetic field are important factors. Efficiency will be increased if the sample is located against the pole N.

Influence of HADO-additives on reduction process of friction face under the influence of different directions of a constant magnetic field are defined: HADO-additives allow to change equipment repair by protective treatment. It's found that the most intensive reducing of a friction face by protective film in operating environment М10Г2к with HADO-ADDITIVES moves if the sample is located against pole N of a permanent magnet that gives possibility to increase life time value of mechanics.

Supervisor – M.Svirid, associate professor