

MODELLING CHANGES OF CONDITION OF AIRCRAFT HYDRAULIC SYSTEM WORKING FLUID

© 2008 A. M. Gareyev

Samara State Aerospace University

The paper presents a model of working fluid condition changes in an aircraft hydraulic system during the overhaul period. The model is developed on the basis of Marcov process theory and intended to define the working fluid purity using lead maintenance technologies in an effort to increase life expectancy of aircraft hydraulic system components.

Hydraulic system, working fluid, model of condition, technical condition control, lead maintenance, working fluid purity

References

1. Alexeyeva, T. V., Babanskaya, V. D., Bashta, T. M. Technical diagnostics of hydraulic drives / Edited by T. M. Bashta. – Moscow: Machinostroyeniye (Machine building), 1989 – 264 pp.
2. Bashta, T. M. Reliability of aircraft hydraulic systems. – Moscow: Transport, 1986. – 280 pp.
3. Timirkeyev, R. G., Sapozhnikov, V. M. Industrial purity and fine filtration of aircraft working fluids. – Moscow: Machinostroyeniye (Machine building), 1986 – 152 pp.
4. Fitch E. C. Fluid contamination control // Technology transfer Series #4, Oklahome, FFS, INC. 1988. – 433 p.
5. Nikitin, G. A., Tchirkov, S. V. Impact of fluid contamination of the reliability of aircraft hydraulic system operation. – Moscow: Transport, 1969 – 184 pp.
6. Grenander, U. Lectures on image theory. – Moscow: Publishing house “Mir”, 1979 – 382 pp.
7. Ovtcharov, L. A. Applied tasks of mass service theory. – Moscow: Machinostroyeniye, 1969 – 324 pp.

Gareyev, Albert Mineaskhatovitch, assistant of aircraft system maintenance, Samara State Aerospace University. Area of research: expeditious control of aircraft system technical condition, non-destructive methods of control.