The strength of hydraulic systems of aircraft control

© I.S. Shumilov

Bauman Moscow State Technical University, Moscow, 105005, Russia

The article discusses the strength of hydraulic control of the aircraft (GSUS) and its elements - the property of the system and its components to maintain integrity (no break) for all permissible operating conditions for a given resource, providing the required level of security and reliability requirements of flights. Recommendations are made to ensure the necessary strength of GSUS and its components based on the experience of security strength of aircraft systems and their elements, confirmed by the operation of the huge fleet.

Keywords: strength, static strength, fatigue strength, hydraulic system, resource, reliability, security, damaging voltage, rated load, factor of safety.

Shumilov I.S. (b. 1938) graduated from Bauman Moscow Higher Technical School in 1961. Dr. Sci.(Eng.), Professor of the Hydromechanics, Hydraulic Machines and Hydropneumoautomatics Department of Bauman Moscow State Technical University. Member of the International Academy of Arts and Sciences, Chairman of the Technical Committee T12-419 State Standard of Russia, Head of the Certification Center of Certification system GOST R. Author of more than 150 publications, 50 inventions. e-mail: shumilov-it@yandex.ru