
**Rationale for the Requirements to Characteristics of Reliability
of Operational Control Means of Aircraft Equipment
in Conditions of the Acceptable Risk**

L. N. Chuvychkin, A. A. Lyubovets

*Military Educational and Scientific Center of the Air Force
N. E. Zhukovsky and Y. A. Gagarin Air Force Academy, Voronezh, Russia*

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Abstract: The article provides a rationale for the requirements to reliability of operational control tools to reduce risks from failures of the aircraft equipment in flight and costs of control and diagnostic operations on land. We propose to use the average specific cost of control as an indicator of economic efficiency of the system of operational control. The developed model of periodic land control on the aircraft flight hours considers the influence of probabilities of false and undetected failures as tool reliability indicators on the cost of control. The model of operational control of a complex system of the onboard equipment at multi-stage servicing allows using an additive cost index of control of conditional subsystems with various values of completeness of control at each stage. Formula for calculating the asymptotic estimates of cost control, including those for ideal control devices and organoleptic control are given. We propose a step-by-step guide for justification of requirements to reliability of control in conditions of acceptable risk.

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