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OPTIMAL DISTRIBUTION OF THE LOADING IN THE RADIAL ROLLING-CONTACT BEARING TAKING INTO ACCOUNT LIMITATION OF MAXIMAL CONTACT FORCES

Abstract

It is considered the variation problem on determination of the law of optimal distribution of the loading in the radial rolling-contact bearing. It is established the purpose to enhance the durability of the latter. The problem is solved on the base of the Euler equation with consideration of limitation of maximum contact forces and the condition of equilibrium of the integral ring. Necessary calculation dependencies are obtained.