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Optimization of technical diagnostics procedures for
hydroelectric power plantsD. Nikolić^a, R. R. Nikolić^{b*}, B. Krstić^c, V. Lazić^d, I. Ž. Nikolić^e, I. Krstić^f, V. Krstić^g^a Technical Faculty in Zrenjanin, University of Novi Sad, Djure Djakovica bb, 23000 Zrenjanin, Serbia^b Faculty of Engineering, University of Kragujevac, Sestre Janjić 6, 34000 Kragujevac, Serbia and^c Faculty of Civil Engineering, University of Žilina, Univerzitná 8215/1, 01026 Žilina, Slovakia^{c,d,e} Faculty of Engineering, University of Kragujevac, Sestre Janjić 6, 34000 Kragujevac, Serbia^f Faculty of Technical Sciences, University of Kosovska Mitrovica, Kneza Miloša 7, 38220 Kosovska Mitrovica, Serbia^g Faculty of Transport and Traffic Engineering, University of Belgrade, Vojvode Stepe 305, 11000 Belgrade, Serbia

Abstract

In this paper, a mathematical model is proposed for determination of the optimal solution for the maintenance system of a specific steel structure – the hydraulic power plant. The aim is to obtain the maximum efficiency of the plant within existing conditions and limitations. The objective of a mathematical model is to select the diagnostics parameters, which define knowledge of the permissible reliability level and certain analytic expression, which corresponds to precisely described state of hydroelectric power plant components assembly. Model of technical diagnostics procedures optimization represents a specific approach to problems of preventive maintaining according to state. It is related to the concept of state parameters change, which represents a basis for obtaining the optimal solution for procedures of technical diagnostics. It also creates direct relations between the law of the state parameter changes and reliability of the considered power plant components.

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1. Introduction

Optimization of the technical diagnostics procedures is being defined by the strategy of a process of establishing the power plant components' condition, providing the plan of active loading and its distribution among the components and assemblies. It requires balancing between the long term objectives and short term restrictions imposed by possibilities and imprecision of available data on power plant components operation [1-2]. The optimization methodology of technical diagnostics procedures is being presented by an algorithm and

* Tel.: +421-948-64-2004; fax: +421-41-513-5690.

E-mail address: ruzicarnikolic@yahoo.com.

