APPLICATION OF CLUSTER ANALYSIS TOOLS BASED ON NEURAL NETWORKS TO IMPROVE FOUNDRY TECHNOLOGIES

№ [1187]

Igor B. Odarchenko[1], Vitali A. Zharanau[1] and Grigory V. Petrishin[2,*]

[1]*Technological Faculty, Sukhoi State Technical University of Gomel, Gomel, Republic of Belarus.*
[2]*Mechanical Engineering Faculty, Sukhoi State Technical University of Gomel. Gomel, Republic of Belarus.*

Abstract

Methods for analyzing the technological similarity of blanks have a good prospect of application for automating the selection of technological parameters for the process of obtaining castings. The paper analyzes the key aspects of the application of methods for numerical calculation of the wall thickness of castings to use the data obtained as the main source of data in systems for neural network classification of parts. The practical result of the introduction of the proposed methods will be the fundamental possibility of an unambiguous and objective assessment of the degree of similarity of castings, in terms of technological identity. This technique is quite universal and can be easily adapted to other technological processes in mechanical engineering.

Keywords: Numerical Calculation, Castings, Neural Network, Similarity of Castings, technological Identity.