USE OF CONTROL VOLUME METHOD FOR THE TEMPERATURE FIELD CALCULATION BY LASER INFLUENCE

©2007 S.P. Murzin, A.V. Mezhenin, E.L. Osetrov

Samara State Aerospace University

The temperature field calculation for the plate of sheet titanium alloy OT4-1 has been carried out by control volume method. It is shown that the forming temperature field is enough uniformly at the selected power distribution of surface energy source and technological object conveying speed. The calculation results correlate satisfactorily with results of experimental study (error is about 10-15%). The received data can be used at the thermal processing modes choise of titanium alloys by strip energy sources.

Titanium alloy, power distribution, energy source, check volume method, temperature field, laser impact, physicomechanical characteristics, thermal processing

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Murzin Serguey Petrovich, S.P. Korolyov Samara State Aerospace University, professor, Dr. Sci. Tech., reader, murzin@ssau.ru . Area of research: interaction of laser radiation with matter, nanotechnology.

Mezhenin Andrey Victorovich, S.P. Korolyov Samara State Aerospace University, postgraduate, murzin@ssau.ru . Area of research: interaction of laser radiation with matter, nanotechnology.

Osetrov Evgeniy Leonidovich, S.P. Korolyov Samara State Aerospace University, student, murzin@ssau.ru . Area of research: interaction of laser radiation with matter, nanotechnology.