

The Technology of Digital Image Processing in Neural Network Control Systems for Pipeline Welding System

MICANS INFOTECH

ABSTRACT

In this paper, modern technologies of adaptive control of welding systems are described. By using robotic welding technical innovations in robotic welding and greater accessibility of sensor control have allowed manual welding with excessive heat and vapor to be replaced. In the coordinate system of the welded parts are shown that the procedures of geometric adaptation based on algorithms and data from laser profilers for calculating of the path of movement of the welding torch. The structure of the control system based on the model of the neural network prediction is considered. The simulation results of the controller neural network positioning system of the welding torch are considered. This article approaches the familiarity with robotic welding and the roles of sensors in robotic welding and their related problems.

EXISTING SYSTEM

- The critical technology for connection large diameter pipes to the main pipeline is still welding.
- These problems can be solved by introducing a system of control of processes of welding.
- Digital image processing and intelligent technologies.
- Automation of industrial robots increased frees man from the unhealthy and monotonous labor and industrial productivity.

PROPOSED SYSTEM

- Automation of welding processes and implementation of adaptive technologies in automatic control systems are the main reserve in providing the reproducibility of the weld quality.
- The technology of adaptive automatic welding processes are provides improved repair of main pipelines of large diameter and productivity in construction.

SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS:

- Processor - intel core i3
- RAM - 2GB
- Hard Disk - 20 GB

SOFTWARE REQUIREMENTS:

- Tool - MATLAB R2016
- Operating system - Windows 7,8

REFERENCE

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