

Technology Transfer

Area of Technology: Mechanical Engineering

Title of the Innovation: A MECHANICAL GRIPPER WITH CONTROLLED OPERATIONS FOR ROBOTIC ARC WELDING

Brief About Innovation

Robots can perform various operations such as welding, painting, pick and place, etc. Besides, a robotic gripper is widely used for different tasks in various fields. The primary industrial robots were presented in the mid-1960s, the improvement of robotic welding had been seen to be genuinely remarkable and is a real application territory for industrial robots among all in today's scenario. In robotized welding, a major concern is to perform the welding by computerized programs which help in making the operation completely automatic. In the current highly competitive environment of manufacturing organizations, improvement in automation is required to compel the manufacturing to enhance their technological strategies. For this, Computer Integrated Manufacturing (CIM) has been proposed in numerous industries for various purposes including enhancement in human productivity, product quality, and capital resource productivity. CIM strategy integrates the databases of various subsystems of automation within the traditional manufacturing framework.

Salient Features:

- The present invention relates to a mechanical gripper (01) for robotic arc welding. More particularly, the present invention relates to the gripper (01) with controlled operations in which sensors are configured at the appropriate locations to get real-time data of welding parameters.
- The prime objective of the present invention is to provide a mechanical gripper for use in robotic arc welding to perform welding operation with minimum errors.
- The present invention is applicable for seam welding for different types of industrial applications. The seam tracking operations play a vital role in extracting seam weld position which further has to be fed with robot controllers along the weld seam path.
- Although the invention has been described with reference to specific embodiments, this description is not meant to be construed in a limiting sense. Various modifications of the disclosed embodiments, as well as alternate embodiments of the invention, will become apparent to persons skilled in the art upon reference to the description of the invention.

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