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A SEMI AUTOMATIC ROBOTIC WELDING SYSTEM

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ABSTRACT

Technical development in robotic welding and greater availability of computer vision based control features have enabled manual welding processes in harsh work environments with excessive heat and fumes to be replaced with robotic welding. The use of industrial robots or mechanized equipment for high-volume productivity has become increasingly common, with robotized Gas Metal Arc Welding (GMAW) generally being used. Thus, sensors play an important role in robotic arc welding systems with adaptive and intelligent control system features that can track the joint, monitor in-process quality of the weld, and account for variation in joint location and geometry. The double electrode process consists of two torches: the main torch and bypass torch. In this process, arc rotation phenomenon causes increase in deposition rate and reduces the arc pressure forming shallow molten pool. This research explain about automatic robotic welding system design, development of system for various industrial aspects.

KEYWORDS: *Robotic Welding System, Sensors, Arc.*