

## Editorial on Robot Welding

Sohan Kumar

*Department of Microbiology, Utkal University, University in Bhubaneswar, Odisha, India*

### ROBOT WELDING

Robot welding is the use of mechanised programmable tools (robots) to fully automate a welding process by conducting both the weld and the component handling. Although certain processes, such as gas metal arc welding, are automated, they are not always identical to robot welding since the materials to be welded are often prepared by a human operator. In high-volume applications, such as the automotive industry, robot welding is widely used for resistance spot welding and arc welding. Arc welding is a joining technique that involves melting and fusing a consumable metal to a base metal with a high electric current. In order to define and monitor the joint geometry before and during a weld in real time, adaptive laser vision can be used to display the joint ahead of the weld electrode. Even though robots were first introduced into US industry in the 1960s, robot welding is a relatively recent application of robotics. Robotic welding did not take off until the 1980s, when the automotive industry started to use robots for spot welding on a large scale. Since then, both the number of robots in use and the number of applications for them have increased dramatically. In North American industry in 2005, more than 120,000 robots were in operation, with around half of them being used for welding. Robotic arc welding has only recently started to gain traction, accounting for roughly 20% of all industrial robot applications. The manipulator, or mechanical unit, and the controller, which

serves as the robot's "brain," are the main components of arc welding robots.

The manipulator is what moves the robot, and there are several different types of manipulators, such as SCARA and cartesian coordinate robots, that use different coordinate systems to guide the machine's weapons. The robot can weld in a pre-programmed role, be directed by machine vision, or do both at the same time. [two] Robotic welding, on the other hand, has proved to be a technology that can help many original equipment manufacturers improve accuracy, repeatability, and throughput. Robot welding is the use of mechanised programmable tools (robots) to fully automate a welding process by conducting both the weld and the component handling. In high-volume applications, such as the automotive industry, robot welding is widely used for resistance spot welding and arc welding. Cartesian, SCARA, cylindrical, delta, polar, and vertically articulated are the six major types of industrial robots. There are, however, many other types of robot setups. Each of these styles has a unique joint arrangement. Robotic welding helps you to save money by using a readily accessible labour pool higher throughput and yields. There will be less cleaning after the weld. Reducing the cost of consumable goods is a good idea. Complete time to market is reduced. Welding processes must always be efficient, consistent in quality, and cost-effective. Semi-automatic welding has become more popular in the field of medium and heavy plate welding, which involves a higher level of technology than thin sheet welding, which is commonly used in the automotive industry.

**Correspondence to:** Sohan Kumar, Department of Microbiology, Utkal University, University in Bhubaneswar, Odisha, India, E-mail: sohan.k@gmail.com

**Received:** April 07, 2021, **Accepted:** April 14, 2021, **Published:** April 21, 2021

**Citation:** Kumar S (2021) Editorial on Robot Welding. J Appl Mech Eng. 10:357.

**Copyright:** © 2021 Kumar S. This is an open access article distributed under the term of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.