

# **ANALYSIS OF INPUT PROCESS PARAMETER OF SPOT WELDING WITH OUTPUT IN LOW CARBON STEEL FOR MANUFACTURING OF AUTOMOTIVE COMPONENTS**

**ANAND S. PANCHAKSHARI<sup>1</sup> & M. S. KADAM<sup>2</sup>**

<sup>1</sup>Student in Mechanical Engineering, Jawaharlal Nehru College of Engineering, Aurangabad, Maharashtra, India

<sup>2</sup>HOD of Mechanical Engineering Department, Jawaharlal Nehru Engineering College, Aurangabad, Maharashtra, India

## **ABSTRACT**

Low carbon steel is most consumable material for manufacturing body frames and internal components of Light Utility Vehicles in Automobile industries. Resistance spot welding is one of the processes to join the parts in auto industries. The focus of this paper to find out qualified input process parameters like Welding current, Cycle time(Hold Cycle, Squeeze Cycle& Weld Cycle) with responses like Nugget diameter , Strength etc. The main part behind the research work is **Assembled Fuel Tank**. The basic material for manufacturing of tank is EDD (Extra Deep Draw) graded cold rolled material of 1.2 mm thick as per **Indian Standard-513**. The trials conducted for experiment on resistance spot welding machine made from **Nash Robotics & Automation, Nasik**. Design of Experiments performed with central composite design based on Response Surface methodology(RSM).

**KEYWORDS:** Low Carbon Steel, Welding Current, Strength, Design of Experiment