



BOOK OF ABSTRACT

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Effect of TIG Welding Parameter of Welded Joint for Different Materials

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Abstract

The study investigates the impact of Tungsten Inert Gas (TIG) welding parameters on the quality of welded joints for various materials. TIG welding is a widely used technique known for its precision and control in creating high-quality welds. However, the welding parameters, such as current, voltage, travel speed, and shielding gas composition, play a crucial role in determining the mechanical properties and overall performance of the welds. This research examines the effects of these parameters on different materials, including mild steel and stainless steel. By analyzing factors such as weld bead appearance, hardness, tensile strength and Impact strength, the study aims to optimize welding conditions for each material type. The results demonstrate that variations in TIG welding parameters can significantly influence the joint integrity, with material-specific considerations guiding the selection of optimal welding conditions. The findings contribute to the advancement of TIG welding techniques for diverse industrial applications, providing a foundation for improving weld quality and performance across a range of materials.

Keywords: impact test, mild steel, stainless steel, Hardness Test.