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Effect of Welding Parameters Controlling Submerged ARC Welding Process

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Abstract:Submerged arc welding (SAW) process is an important component in many industrial operations. The research on controlling metal transfer modes in SAW process is essential to high quality welding procedures. The SAW parameters are the most important factors affecting the quality productivity and cost of welding joint. Weld bead size and shape are important considerations for design and manufacturing engineers in the fabrication industry. In order to produce good welding or high quality weld, a skilled personal is required and the other reason is the need to select the various welding parameters to provide good quality weld which is identified by the micro structure, grain size, residual stress, the amount of spatter and a quality control system must be developed to eliminate the various predictive works. This is done to specify and establish the interrelation between the mechanical properties and the various weld parameters as well as it also investigates the most ideal combination of the various parameters which gives good weld quality, high strength and durability. This project has been planned to go through a series of phases and tests to specify the interrelation between the weld bead geometry and the mechanical strength. The test also involves the approach for finding the most optimum and the suitable process parameters which is controlling the Submerged Arc Welding.

Keywords: SAW Welding, Parameters, Mechanical properties.