

Overcoming the Limitations of a Single-Point Sensing Technique for Monitoring Weld Pool Oscillations

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Abstract

Two weld pool oscillation sensors are presented that attempt to overcome the shortcomings that exist with a single-point sensor. This poster presents the implementation of a single-point sensing technique that collects the specular reflection of arc light from a GTA weld pool. Its limitations as a sensor for a penetration control system are discussed. Two alternative sensing techniques are, therefore, proposed. A comparison of the benefits and drawbacks are presented along with a suggestion for future research directions.