

## **Thermal cycle simulation of welding process in low carbon steel**

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**Authors:** Z. Boumerzoug, E. Raouache, F. Delaunois.

### **Abstract**

This paper is a contribution to the study of weldability of low carbon steel. It presents the microstructures obtained after thermal cycle simulation of welding by rapid heating and cooling treatments in a specific simulation equipment. Optical microscopy and microhardness measurements are used as characterization techniques. We have found that the obtained microstructures correspond exactly to those observed in real welded joint realized by arc welding.

**Keywords :** Steel; Thermal cycle simulation; Welding; Microstructures.

**Link** <http://www.sciencedirect.com/science/article/pii/S0921509311010446>