

Theoretical and Experimental Temperature Fields in Butt Welded Joints

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ABSTRACT

This paper presents several theoretical and experimental results of temperature field on butt-welding. A theoretical method using finite element analysis has been used for the temperature prediction in the welded joints. Several measurements and visualization of the temperatures distribution have been made using infrared thermography. The welding conditions are similar to the simulation conditions used in finite element analysis. Infrared thermography, a non-contact temperature measurement method, is the technique of analyzing images, from the thermal radiation given off by a subject, by means of an infrared camera. The errors were calculated for all cases and were plotted error curves.

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