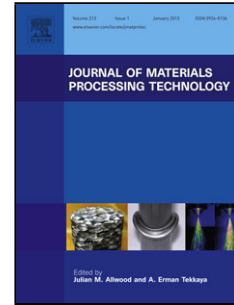


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Comparison of laser and TIG welding of laminated electrical steels

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ABSTRACT

TIG welded joint had higher strength than laser welded joint, while magnetic properties of the TIG welded laminations degraded much more seriously. Residual stress distribution was measured to reveal the relationship between stress and magnetization properties. And eddy current simulation was conducted to analyze the effect of welding process on the eddy current losses of the welded laminations. This manuscript could act as a guide for choosing the proper welding methods to join the laminated electrical steels.

Keywords: Electrical steel; Welding; Magnetic property; FEM.

1. Introduction

With the rapid development of the electric vehicle and robot, high performance electrical

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