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# FINITE ELEMENT ANALYSIS OF THE THERMAL RESIDUAL STRESSES OF PRECIPITATE FORMED DURING THE WELDING PROCESS

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**Abstract :** In the present work the finite element method is used to analyze the distribution and the level of residual stress induced in a matrix by the phenomena of precipitation  $\text{Fe}_2\text{C}$  compounds resulting from the process of welding. The effect of temperature and the interaction between precipitates on the residual stress level were highlighted

**Keywords :** Weld, Defect, Precipitate, contrainte résiduelle