

论文

Ti-Al-Cr-Fe四元系 $\alpha/\gamma$ 相平衡的研究

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摘要: 设计了一种简单的扩散偶,用扩散偶-电子探针法,测定了1200和1250°C Ti-Al-Cr-Fe四元系中 $X_{Cr} \leq 4\%$ 和 $X_{Fe} \leq 1\%$ 范围内的 $\alpha/\gamma$ 相平衡关系和相平衡成分,绘出了四元系的局部等温正方形结果表明,在Ti-Al-Cr-Fe四元系中,Cr有提高Fe在 $\alpha$ 相中的溶解度的作用;Fe亦有提高Cr在 $\alpha$ 相中的溶解度的趋势

关键词: Ti-Al-Cr-Fe四元系 相平衡

STUDY ON  $\alpha/\gamma$  PHASE EQUILIBRIUM IN Ti-Al-Cr-Fe QUATERNARY SYSTEM

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Abstract: A simple type of diffusion couple was designed. The compositions of the phase equilibrium  $\alpha/\gamma$  at 1200°C and 1250°C in Ti-Al-Cr-Fe quaternary system have been determined by the diffusion couple-electron probe method, and partial isothermal squares for Ti-Al-Cr-Fe quaternary system have been drawn. The results show that Cr has the effect of increasing the solubility for Fe in the  $\alpha$  phase and Fe has the effect of increasing the solubility for Cr in the  $\alpha$  phase.

Keywords: Ti-Al-Cr-Fe quaternary system phase equilibrium

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