金属学报 1998, 34(8) 785-792 DOI: ISSN: 0412-1961 CN: 21-1139/TG

论文

Al-Mn合金中粒子促进形核及初期再结晶织构 Ⅰ.粒子周围的形变区及粒子促进形核

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摘要： 利用SEM中的背散射电子衍射技术研究了Al—1．3Mn质量分数，%）合金中不同形变取向基体中粒子周围亚晶以及再结晶初期相应的粒子促进形核晶粒的取向分布，并将结果与单晶中的情形进行了比较结果表明，多晶中各形变取向基体中粒子周围亚晶转动的规律及粒子促进形核晶粒的取向与同取向单晶中的情况相同，并非是随机分布的．文章的第二部分将分析粒子与其它形核地点（晶界、立方带）的交互作用以及再结晶织构的形成

关键词： Al—Mn合金 粒子促进形核 再结晶织构 背散射电子衍射

PARTICLE STIMULATED NUCLEATION AND THE FORMATION OF RECRYSTALLIZATION TEXTURE IN Al-Mn ALLOY CONTAINING PARTICLES Ⅰ. Deformation Zones Around Particles and Particle Stimulated Nucleation

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Abstract: The rotations of subgrains around particles in deformed matrices of different rolling orientations and their nucleation at the early stages of recrystallization were studied by means of electron back scattering diffraction (EBSD) technique in an SEM and were compared with those in single crystals of similar orientations. Results show that the subgrain rotations around particles within deformed matrices and the orientations of particle stimulated nucleation grains are not random, but singular to those in the similarly oriented single crystals. The second part of this work will deal with the interaction of particles with other nucleation sites (i.e. grain boundaries and cube bands) and the formation of recrystallization texture.

Keywords: Al-Mn alloy particle stimulated nucleation recrystallization texture EBSD

收稿日期 1998-08-18 修回日期 1998-08-18 网络版发布日期

DOI:

基金项目:

国家教委留学回国人员启动基金!97－832

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1．杨平;O.Enler.Al—Mn合金中粒子促进形核及初期再结晶织构 Ⅱ.粒子与其它形核位置的交互作用及初期再结晶织构[J]. 金属学报, 1998,34(8): 793-801