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论文

黄铜在氨水中的溶解过程对其局部塑性变形的促进作用

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摘要： 用激光云纹干涉法研究了黄铜在氨水溶液中应力腐蚀过程中缺口前端位移场和应变场的变化结果表明，在应力腐蚀裂纹萌生前，溶解（腐蚀）过程本身能使缺口前端塑性区增大，与此同时也使塑性区中各点的塑性变形量增大，即溶解过程本身能促进塑性变形。

关键词： 激光云纹干涉 黄铜 应力腐蚀 塑性变形

DISSOLUTION FACILITATING LOCAL PLASTIC DEFORMATION FOR BRASS IN AMMONIA SOLUTION

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Abstract: The variations of displacement field and strain field around notch tip of brass specimen during stress corrosion crack in 1mol/L NH4OH+5g/L CuC12 solution were investigated by the laser moire interferometry method. The results indicate that the anodic dissolution (corrosion) increases the plastic zone around notch tip of specimen and the plastic deformation amounts of the various points in plastic zone i.e. the anodic dissolution can facilitate the local plastic deformation around the notch tip of specimen.

Keywords: laser moire interferometry brass SCC facilitation of deformation by dissolution

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