

In-situ Observations Using SEM-EBSD for Bending Deformation in Single-Crystal Materials

Authors : Yuko Matayoshi, Takashi Sakai, Yin-Gjum Jin, Jun-ichi Koyama

Abstract : To elucidate the material characteristics of single crystals of pure aluminum and copper, the respective relations between crystallographic orientations and micro structures were examined, along with bending and mechanical properties. The texture distribution was also analysed. Bending tests were performed in a SEM apparatus while its behaviors were observed. Some analytical results related to crystal direction maps, inverse pole figures, and textures were obtained from electron back scatter diffraction (EBSD) analyses.

Keywords : pure aluminum, pure copper, single crystal, bending, SEM-EBSD analysis, texture, microstructure

Conference Title : ICTCME 2014 : International Conference on Textile Composites, Materials and Engineering

Conference Location : Sydney, Australia

Conference Dates : December 15-16, 2014