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Prediction of fatigue strength of micro-specimen on copper and aluminium alloys under rotating bending load

Abstract

Prediction of Fatigue strength micro-specimen of non ferrous materials such as aluminum and copper alloys materials has been investigated using micro-fatigue testing machine under rotating bending load. The test was carried out at various specimen diameters such as 1 and 2mm. The results show that the fatigue strength for micro-specimen with diameter of 1 and 2mm for copper alloy material was higher than of aluminum alloy material. The fatigue strength for specimen diameter of 2mm was higher than of specimen diameter of 1mm. In addition, when compare the fatigue strength of copper and aluminum alloys materials was lower than of fatigue strength of steel materials.