

Review on Wear Behavior of Magnesium Matrix Composites

Authors : Amandeep Singh, Niraj Bala

Abstract : In the last decades, light-weight materials such as magnesium matrix composites have become hot topic for material research due to their excellent mechanical and physical properties. However, relatively very less work has been done related to the wear behavior of these composites. Magnesium matrix composites have wide applications in automobile and aerospace sector. In this review, attempt has been done to collect the literature related to wear behavior of magnesium matrix composites fabricated through various processing techniques such as stir casting, powder metallurgy, friction stir processing etc. Effect of different reinforcements, reinforcement content, reinforcement size, wear load, sliding speed and time have been studied by different researchers in detail. Wear mechanism under different experimental condition has been reviewed in detail. The wear resistance of magnesium and its alloys can be enhanced with the addition of different reinforcements. Wear resistance can further be enhanced by increasing the percentage of added reinforcements. Increase in applied load during wear test leads to increase in wear rate of magnesium composites.

Keywords : hardness, magnesium matrix composites, reinforcement, wear

Conference Title : ICMPE 2016 : International Conference on Mechanical and Production Engineering

Conference Location : Vancouver, Canada

Conference Dates : August 04-05, 2016