Morphological study of friction stir processed aluminium metal matrix composites

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ABSTRACT
This paper demonstrates the morphological study of friction stir processed (FSPed) aluminium metal matrix composites. Friction stir processing was implemented during fabrication process to produce metal matrix composites (MMC). The MMC consisted of aluminium alloy AA6061 and rice husk ash (RHA) particles. The morphological study compared the wear performance of as-received AA6061, FSPed AA6061 and FSPed AA6061/6vol% RHA. The result showed that the FSPed AA6061/6vol% RHA had the best wear performance among the other specimens. This was specified by less delamination, smoother worn surface and shallower grooves on this FSPed composite compared on the alloy material as presented in the scanning electron microscopy (SEM) morphological study.

KEYWORDS
Al metal matrix composites; Friction stir processing; Morphological study; Surface composites; Wear performance

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