

عنوان مقاله:

Investigation the Effects of Layer Structure on the Tribological Behaviour of PAI Overlays Containing MoS₂

محل انتشار:

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خلاصه مقاله:

There is demand for the reduction of friction loss under poor lubricating conditions, for higher contact pressure, and a longer lifetime in internal combustion engines. Overlay technology is one of the effective means for reducing friction loss and improving seizure resistance of journal bearings. The present study describes the fundamental tribological behavior under boundary lubrication of a polyamide-imide (PAI) overlay containing molybdenum disulfide (MoS₂) powder. Specimens with different layer structures for the overlay were prepared, and the effects of the layer structure of the overlays were investigated experimentally. As result, the MoS₂ in the surface overlay layers became highly aligned through a high-speed spin coating process. In the case of the overlays containing MoS₂, the coefficient of friction became almost constantly with a gradual increase, and this was in contrast to the case of the overlays without MoS₂.

کلمات کلیدی:

Tribology, MoS₂, OVERLAY, Composite, solid lubricant

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