

Callophyllum Inophyllum shell derived of activated carbon for additive of machining lubricant

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ABSTRACT

Main cause of energy dissipation in machining is originated from friction and worn surfaces. Thus, more research focusing on the energy saving by antifriction/wear have gained tremendous attention among researchers. The aim of this work is to utilize a Callophyllum Inophyllum shell derived activated carbon (AC) as an additive for machining lubricant. The Callophyllum Inophyllum shell is selected due to their widely and availability of the resource that can be converted into activated carbon easily. A lubricant is formulated using selected of derived AC and palm oil with different weight ratio of the AC (0.05, 0.10 and 0.15 % wt). The mixture of these substances was evaluated as a lubricant oil additive to reduce the friction between two metallic surfaces. The four ball test was used to measure the friction coefficient.

KEYWORDS

Activated carbon; Additives; Lubricant

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