

THE INFLUENCE OF CHARCOAL CARBURIZING MEDIA FROM COCONUT SHELL ON MECHANICAL PROPERTIES OF MOTORCYCLE SPROCKET

Name : Abdurrahman

Nim 2204211358

Lecturer : Rahmat Fajrul, ST.,MT

ABSTRACK

This study investigates the effect of carburizing using coconut shell charcoal as a carbon source on the mechanical properties of motorcycle sprockets. The pack carburizing process was carried out at a temperature of 800°C, followed by quenching in oil and rainwater. Rockwell hardness tests showed that the untreated sprocket had an average hardness of 12,6 HRC. After carburizing and oil quenching, the hardness increased to 16.6 HRC, while rainwater quenching resulted in a hardness of 22,2 HRC. These results indicate that coconut shell charcoal is effective as a carburizing medium for enhancing sprocket hardness, especially when combined with oil quenching.

Keywords: Carburizing, Coconut Shell Charcoal, Quenching, Hardness, Sprocket.