ABSTRACT

CHISEL WORN-OUT AND MAGNESIUM MICRO STRUCTURE ON DRY MILLING CONDITION

By
BONDAN SUDIANTO

Using magnesium as the steel and iron for the alternative way has been do as far until this decade. The engineer process is describe a process about material loosing. Engineer process worked for a few parameter. Mechanical parameter coming from feed rate, cutting speed and deep of cutting. The purpose of this research is to test about engine effect from parameter cutting influence for chisel and micro magnesium structure. Worn-out testing can be test with microscope. Micro structure test by microscope with 100 times magnification. On worn-out test, the six Run Order (RO) got the longest faster time chisel, in 5 minute with cutting speed about 42.7 m/t, feed rate 0.25 mm/rev and deep of cutting 3 mm. In the 5 Run Order (RO) got the slowest, 77 minute with 22.86 m/t speed of cutting, 0.15 feed rate and 1 mm deep of cutting. On micro structure test magnesium have no micro structure changing. In this research the conclusion if cutting speed on engine milling process is not influential for micro magnesium structure.

Keyword : MgAZ31, MILLING ENGINE, CHISEL 8MM d., ETCHING LIQUID, USB MICROSCOPE