ANALYSIS OF FORGING EFFECT TO CHARACTERISTIC OF MATERIAL AND MACRO AND MICRO STRUCTURE WITH COMPOSITE LAMINATE METHOD STEEL AND SPRING LEAF WITH VARIASION FOLD TWO TIMES

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Abstract

Composites is combination from two materials or more what to be one until produce the materials with different of characteristic from first composer materials. Technology of fabrication composites what back surface this research use composites laminate method.

This research is made to know effect of inserted with two times fold to characteristic of mechanic and macro and micro structure what formed for next may be can to be reference to get better of characteristic mechanic in tool object fabrication are like sickle, machete, knife etc.

Result from research about composites laminate with two times fold variation produce materials with crushed strength as big as 339,41 N/mm² , tensile strength as big as 368,35 N/mm² , elongation as big as 2,8%, stiffness as big as 11624,78 N/mm² , hardness as big as 86,83 HRB and produce composites with micro structure pearlite and ferrite what indicate characteristic composites is hard and tough.

Keywords: Low Carbon Steel, Composite Lamina, Forging, Mechanical properties, microstructure.