THE EFFECT OF QUENCHING VARIATIONS ON STRENGTH MOMENTS IN MIXED HARDENING BOLTS ALUMUNIUM COR

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ABSTRACT

Casting is a process of forming materials by melting for pouring into the mold. Then the liquid is left in the mold until it freezes. Factors that affect the casting process to increase the moment's value, is quenching process. The purpose of this study was to determine the effect of quenching variations to moment strength of aluminum cast hardening bolts. The torque test results can be seen that the highest value is owned by the SAE 40 quenching media with an average torque strength of 9.77 Nm and an F value of 20.35 N, the highest inertia value with 240 g.mm^2 with water quenching media. inertia values are gained from the results of calculations, called r (radius of bolt diameter) multiplied by m (mass of bolts). Then it can be also concluded that the torque strength is getting smaller and increase the torque value, increase the F value, otherwise the smaller torque value, decrease the F value. The mass value of the bolt, getting smaller the mass value of the bolt then the bolt also has a lower inertia (I) value. Getting the greater mass value of the bolt, increase the value of (I) inertia.

Keywords: casting, moment, torque, inertia