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## Improving mechanical properties of Al alloys by different quenching methods

Jasim and Roshan

### Abstract

The authors have worked on improvement of properties of 7075-T6 Aluminium Alloy by Quenching in 30% Polyethylene Glycol and Addition of 0.1%B. Their study aimed at improving properties of above Al alloys such as impact toughness, thermal age hardening behavior and corrosion resistance. They concluded that Quenching a medium of 30% polyethylene glycol improves most of the properties of alloy that used in this study such as compression resistance, microstructure and thermal stability. Addition 0.1% B to the base alloy improves impact toughness by (30%) when quenching in water and by (50%) when quenching in 30% PAG at aging temperature of 150<sup>0</sup>c corresponding to the base alloy. Thermal stability improved when adding 0.1% B (b alloy) by (18%) at aging temperature 150<sup>0</sup>c in comparison to the base alloy corrosion resistance in 3.5% Nacl solution improved when adding 0.1% B (b alloy) by (234%) at aging temperature 150<sup>0</sup>c in comparison to the base alloy.