

## Abstract Details

**Title** A review on deformation behavior of extruded aa6060 and aa6063 alloys

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**Abstract :** The 6xxx series aluminium (Al) alloys are used for several applications in building, automobile, and aerospace industries. The alloys are generally processed using hot extrusion. The commercialized AA6060 alloy is suitable for various surface and heat treatments and exhibits excellent properties like formability, corrosion resistance etc. The temperature used for hot extrusion of AA6060 alloy lies typically in between 400-500 °C. It is a wrought alloy of Al-Mg-Si family and shares a close relationship with alloy AA6063 than to AA6061. The differently shaped profiles employed for diverse applications are fabricated by AA6063 alloy using extrusion. The chemical composition of AA6063 alloy comprises marginally higher Mg concentration than AA6060 alloy. Glazing bars, window frames, and windscreen sections are some typical applications of the AA6060 alloy. Various extrusion techniques are used for AA6060 and AA6063 alloys. No extrusion technique entirely utilizes the potential of strain hardening. Therefore, the present study is focused on the advantages and disadvantages of various extrusion techniques used for the alloys. A comparison of extrusion techniques suitable for AA6060 and AA6063 alloys was also focused. The comparison of the extrusion behaviour of AA6060 and AA6063 alloys with the results described in the literature was also accomplished.

**Keywords:** Aluminium alloy, Extrusion, Strain hardening, Formability, Aging temperature.