EFFECT OF ARTIFICIAL AGING ON ALUMINIUM 6061T651 AFTER ROLLING PROCESS THE MECHANICAL PROPERTIES AND MICRO STRUCTURE

Name Of Student : MOHAMMAD HERY SUSANTO
NRP : 2109 030 079
Department : D3 Teknik Mesin FTI – ITS
Consellor Lecturer : Ir. Eddy Widyono, MSc.

Abstract

Technological advances in the field of automotive encourage businesses in the automotive field for the race the race issue a product as possible. Based on this aluminum will become a widely used material because aluminum has a low price and has good machinability properties.

Aluminium 6061T651 is one type of aluminum alloy Al, Mg, Si which has undergone a tempering after cold working. Alloys can be strengthened and hardened by tempering the residual stress at the time of production will be lost and the mechanical properties of the material would be better.

Effect of artificial aging on the material to undergo a process of rolling is a material with a diameter of 200 mm rolling the tenacity increases but decreases hardness and strength. For diameter 300 mm rolling the strength and hardness increases and ductility decreases.

Keywords: Aluminum, Roll, Artificial Aging, mechanical properties, Micro Structure