

**KEKERASAN DAN KETEBALAN PELAPISAN ALUMINIUM  
PADA BAJA ASTM A36 HASIL PROSES *HARDENING – HOT  
DIP GALVANIZING* DAN *HARDENING TANPA HOT DIP  
GALVANIZINNG* (*Hardness And Thickness Of The Aluminum  
Coating On ASTM A36 Steel Resulting From Hot Dip  
Galvanizing Hardening And Hardening Without Hot Dip  
Galvanizing Process*)**  
Pembimbing (2 orang)

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***ABSTRACT***

*Carbon ASTM 36 steel is a material much needed by the human in the industrial world to support daily needs, especially in the automotive industry. Because of it's low carbon, it is easily shaped by various tooling device. Based on the carbon content, carbon steel has considerable potential to be used as the raw material components of the mechine, but because it's carbon content is below 0.3%, it has to be trated with heat to achive the desired degree of hardness. In the material's of science there are two ways of heat treatment to increase the value of hardness against steel, it's heat treatment and platic deformation. The heat treatment process in general is composed of hardening, tempering, carburizing and annealing. However, when the steel is used as components of automotive parts and construction, it is often damaged by corrosion. Based on this problem, the idea of conducting experiments to increase the quality of low-quality of the carbon steel ASTM A36. The expected outcome was an icrease in hardness and toughness against corrosion.*

**Key words:** *Hardness, Thickness, Hardening, Aluminum ASTM A36 Steel, Hot Dip Galvanizing.*