

**ABSTRACT:**

ADC 12, ADC 1 and HT 1 die cast aluminums mainly differ in their composition of silicon. The shape of silicon particles had made a difference in term of improving strength, elasticity, corrosion resistance and promotes large grain sizes which causes increasing magnetic permeability, and presumably corrosion. In this research, the effect of the silicon composition on the corrosion behavior was investigated. Through immersion corrosion test for the period of 28 days, the corrosion behavior of die-cast ADC 1, ADC 12 and HT 1 aluminum alloys had been determined. Further assessment of microstructural examination was conducted with the morphology and the location of the pits. The experimental results showed that the corrosion rate was the highest in the sample with the least of silicon content, which is ADC 12. Microstructural observation with areal analysis revealed that the pitting morphology at the eutectic silicon and intermetallic phases being dependent upon the interface with the aluminum phase. More interface area promotes more pittings, since the pitting corrosion are more active at the interfaces.