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## Feasibility study of welding Al 7075 aluminum alloys with metal inert gas welding (MIG)

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Al 7075 aluminium alloys are widely used in automobile and aerospace industry due to its light weight, stronger, and high hardness. Fusion welding processes are commonly used in joining the aluminium alloys. Metal Inert Gas (MIG) was used due to its low cost and it is a general method used by the welders. However, defects usually occurs using fusion welding because of improper welding parameters and types of filler metal. The purpose of this project is to study the effect of filler metal and welding parameters on the weldability of welded Al 7075. Welding parameters used are current ranged at 100-110 (A), voltage ranged at 20-22 (V), welding speed is 500 (mm/min), shielding gas Argon (AR) is 25 (L/min), and two different types of filler metal which are A4043 and A5356. A few samples from the welded specimens were cut at the weld area for Vickers hardness testing and tensile testing. Microstructure of welded joint was observed after the welding process.

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