

## عنوان مقاله:

Modeling of Weld Penetration in Gas Metal Arc Welding Process by Fractional Factorial Technique

## محل انتشار:

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## خلاصه مقاله:

In gas metal arc welding (GMAW) process, selecting appropriate values for process parameters is essential in order to control heat input into the workpiece from which reliable predictions can be made about the metallurgical and the mechanical properties of welded joints and at the same time to get the required bead size and quality. Also, conditions must be selected that will ensure a predictable and reproducible weld penetration, which is critical for obtaining high quality welds. In this paper, the effect of various welding parameters on weld penetration in aluminum alloy 5083 plate by mechanized gas metal arc welding process was investigated. The wire feed speed, welding voltage, nozzle-to-plate distance, and welding speed were chosen as welding parameters. The weld penetrations were measured for each specimen after the welding operations and the effects of these parameters on penetration were investigated.

## کلمات کلیدی:

Gas metal arc welding (GMAW); Weld penetration; Fractional factorial technique; Modeling; Analysis of variance; Multiple linear regression

## لینک ثابت مقاله در پایگاه سیویلیکا:

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