전자기펄스용접에서 용접강도에 미치는 접합간격의 영향

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Effects of the Stand-off Distance on the Weld Strength in Magnetic Pulse Welding

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Abstracts ; Although magnetic pulse welding(MPW) is not a recently developed technique, it has gained the attention of the automotive industry. MPW has become an accepted welding process because it enables the joining of similar, as well as dissimilar materials, with a very short cycle time, without the need for filler metal and gases.

In this study, the effect of the stand-off distance on the weld strength has been investigated. The compressive strength of the MPW joints was evaluated using UTM. The interface of weld, IMC composition and morpology were studied by SEM and EDS.

It was concluded that the stand-off distance and the voltage are the main parameters influencing the strength of weld. In case of too high stand-off distance, it influenced harmful effect because of the resistance of deformation.

Key Words : Magnetic Pulse Welding, Stand-off Distance, Weld Strength, Compressive Strength