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Resistance spot welding of galvanized high strength interstitial free steel

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ABSTRACT: Variation in dynamic contact resistance with the change in welding process parameters such as weld current, weld time and electrode force were taken into account for establishing the range of adequate nugget formation parameters. Influence of the welding process parameters on the shear – tensile strength, nugget diameter and the observed failure mode was analysed. The adequate resistance spot welding process parameters for galvanized high strength interstitial free steel sheets of 1.6mm thickness were estimated as 8kA weld current, 250ms weld time and 3.5kN electrode force. Increase in the mean dynamic contact resistance led to a significant reduction in nugget diameter. A critical nugget diameter

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