MECHANICAL PROPERTIES OF AUSTENITIC STAINLESS STEEL RESISTANCE SPOT WELDS

MECHANICKÉ VLASTNOSTI AUSTENITICKÉ NEREZOVÉ OCELI A ODOLNOST BODOVÝCH SVARŮ

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Resistance spot welding was used to join austenitic stainless steel sheets. Mechanical properties of the spot welds were evaluated using tensile shear test. Mechanical behavior was described by peak load, failure energy and failure mode. The relationship between weld fusion zone attributes and failure behavior were studied. Generally, it was observed that increasing fusion zone size is accompanied by an increase in load carrying capacity and energy absorption capability. However, when expulsion occurs, despite almost constant weld fusion zone size, energy absorption capability reduces significantly due to increase in electrode indentation depth.

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