

Does a hexagonal nut require a higher welding current?

Moreover, the welding current was dependent on the geometric design of the projections. The annular projection of the high-performance (HP) weld nut required much higher welding current compared to the three and four projections of the hexagonal (Hex) and square (SQ) nuts, respectively.

Can square nut improve projection welding performance?

Provided by the Springer Nature SharedIt content-sharing initiative This study provides an optimal shape of square nut for better projection welding performance. Both experimental design method and electrical-thermal-mechan

Why is nut projection welding not considered a resistance welding?

This is because heat losses due to convection and conduction can be ignored since nut projection welding is performed within few milliseconds of the welding process, which is identical to that of resistance welding.

Table 11 Values of setdown S according to various levels of design variables (in %)

Can setdown be used as a characterizing parameter for optimized square weld nut?

Formation of wider contact area between the sheet and the molten nut projections with setdown reduces the stress concentration by distributing the external applied load around fusion zone. This confirms that the setdown can be used as a characterizing parameter for assessing the welding performances of optimized square weld nut.

What are the advantages of projection welding of nut?

Since it has the advantages of high production efficiency, no shunting effects, and the ability to arrange solder joints on narrow locations without the limitation of point distance, projection welding of nut has been widely used in the automotive industry.

How to improve fatigue performance of a welded nut?

An increase in sheet metal thickness seemed to be the best way to improve the fatigue performance of a welded nut, whereas an increased thread size or the introduction of a higher-strength sheet material resulted in only minor improvements.

This study is to investigate capacitor discharge welding (CDW) of M8 hexagonal flange welding nuts to Al-Si coated 22MnB5 steel sheets. Pullout tests, microstructural analysis, and fracture...

Welding Performance: Evaluate the welding performance of the energy storage welding machine. A high-quality machine will deliver consistent and precise welding results. Look for features ...

The Basics Of Drawn Arc Stud Welding. Drawn arc stud welding is a process by which a metal stud is joined

to a metal workpiece by heating both parts with an arc. It permits strong, one-sided welds on base metals with thicknesses ...

Producing a weld bead that's the right size, shape, and depth involves many variables. Arc welding students remember most of them by reciting the CLAMS acronym since each letter stands for a welding parameter. The 5 ...

Using high-amperage MFDC inverters, low-impedance transformers, and optimized weld control parameters, CPRW now can employ the same welding current rise rates as CD systems. And like conventional MFDC ...

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Description. This projection welding machine are vertical motion type pressurizing mechanisms. Due to the compressibility of the air, the follow-up of the pneumatic welder is superior to that of ...

Tucker's Nutfast by STANLEY's Engineered Fastening offers reliable nut welding solutions for strong, cost-effective connections to sheet metal. ... DCE 1500 control and energy unit, for up to 5 outlets, with serial or parallel customer ...