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**Clinching process for joining dissimilar materials: state of the art** (Article)

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## Abstract

**Clinching** is a method for mechanically **joining** sheet metal of different thickness and properties in which the two plates to be joined undergo plastic deformation. The **clinching process** is established by connection or **joining** using simple tools: a punch and a die. This method has different characteristics compared to thermal **joining** methods, such as spot welding, including low purchase and operating costs, little preparatory work, safe and environmentally friendly, interesting mechanical properties, reproducibility, and durability. In this article, a brief review of traditional **joining** methods for **dissimilar materials** and the **clinching process** are illustrated in greater detail. In addition, the article looks to guide researchers for future work by identifying weaknesses of the current processes as well as potential for valuable contributions in the field of **clinching**. © 2015, Springer-Verlag London.

## Author keywords

**Clinching**; Mechanical methods; Metal forming; Resistance spot welding; Review; Welding

## Indexed keywords

**Engineering controlled terms**: Durability; **Joining**; Metal forming; Operating costs; Resistance welding; Reviews; Sheet metal; Spot welding; Welding**Clinching**; **Clinching process**; Different thickness; Mechanical methods; Preparatory works; Reproducibilities; Resistance spot welding; **State of the art****Engineering main heading**: Dissimilar materials

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