



## **Modern methods of joining by riveting**

### ***Metode moderne de îmbinare prin nituire***

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#### **Abstract**

The process of riveting with hybrid effect (mechanical grip and friction welding) is an innovative variant for joining metallic materials. Joining techniques using this process have great potential for development and implementation in major industrial areas.

The paper presents preliminary results obtained at ISIM Timisoara, demonstrating the idea that the new riveting process is viable. The experiments were carried out for the base materials from aluminum alloys category (EN AW 1200, EN AW 6800), respectively X155CrVMo12 steel rivets.

Tests and assessments undertaken have led to obtaining important primary technical data for the principle of the process, the formation of the joint, data on technological parameters, rivets configuration and influence factors.

Based on assessment of experiments conducted to date, we can conclude that it is necessary to further develop research programs for learning, defining and development of the new complex riveting process for implementation in industrial activities.

#### **Keywords**

Hybrid riveting, innovative process, metallic materials, experiments