

# Welding and Joining Technologies for Transportation Applications

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Welding and joining technologies are becoming more vital for transportation applications as the demand for different and more environmentally friendly solutions increases. This presentation will cover a number of examples of work funded by the European Space Agency in this field, but will also include other applications in the space, air and land transportation sectors.

ESA programmes will include:

Welding of spun formed tanks using electron beam, friction and arc welding in several aluminium alloys.

Thruster valve fabrication comparison, electron beam versus laser welding.

Diffusion bonding of heat exchangers.

Dissimilar joining of combustion chamber materials for rocket engines.

Welding and Joining in other relevant sectors:

Various welding applications for the electrification of transport.

Challenges in the implementation of Hydrogen power and infrastructure.