



Project „Flexible Assembly Processes for the Car of the Third Millennium (MyCar)“

Methodology Description

Flexible fixture for laser cutting



Methodology approach

Basics for a Reconfigurable Fixture

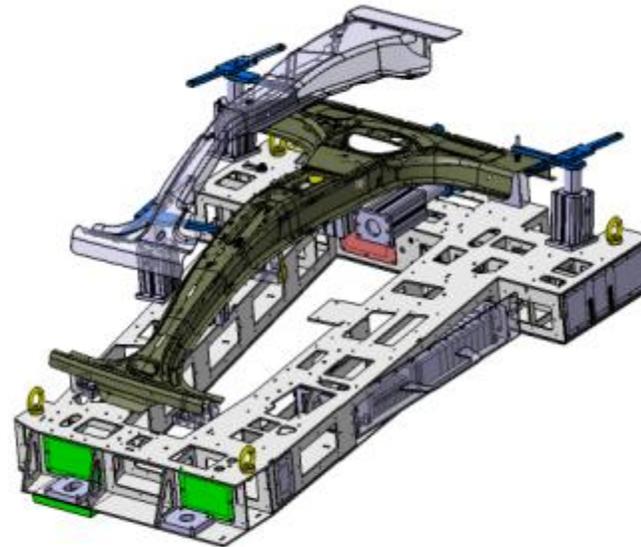
How to implement a flexible fixture for laser cutting of UHSS parts?

What parts are eligible to be cut on a reconfigurable fixture?

Methodology approach

The driving idea

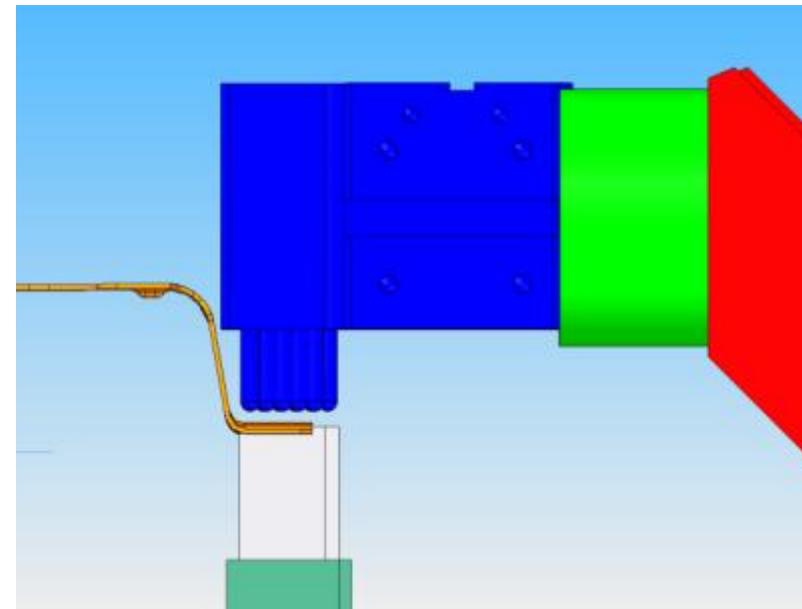
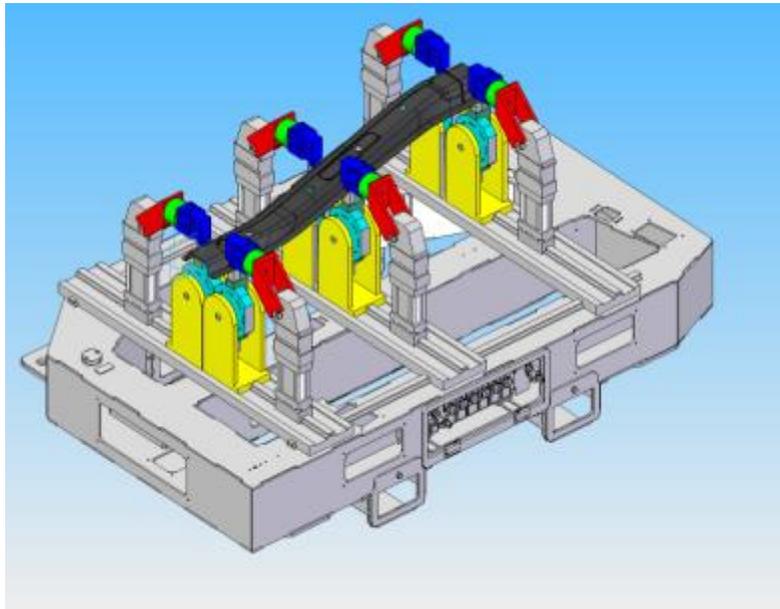
Looking at the shape of same parts (e.g. B-Pillar) coming from several models/carmakers, it was found that, despite the parts are different, they seems to be similar



To cut the parts in the same fixture, a series of adjustments are needed on the fixture

Methodology approach

Using clamps and components developed in the MyCar project by other partners, it was found it is possible to move the reference and clamps position to refer and cut different parts, when they are of the same family.



The virtual prototype allowed to check the possibility to cut parts of floor reinforcement coming from different models and segment of FIAT group

Benefits of the approach

- **Expected benefits:**
 - **Reduction of fixtures in production**
 - **Enhanced flexibility and production mix**
 - **Applicability in many similar parts**
 - **Cost reduction**
 - **Higher reliability**