Initial situation:

The increase in the dimensional accuracy of the automotive body represents an important lever for reducing quality problems and subsequent work in the final assembly. The dimensional accuracy of the body is characterized in particular by product, component and process tolerances. Process tolerances result primarily from the joining technique used as well as the geometry and joining fixtures used.

Due to the high number of fixtures in automotive body shop, there is a desire to reduce or eliminate the same in order to increase the dimensional accuracy of the body.

Your tasks:

The aim of this work is to show that eliminating fixtures in automotive body shops offers potential for increasing dimensional accuracy and to show alternative solutions to the fixtures.

For this purpose, first the influence of the fixtures on the tolerance chain in the body construction is shown and evaluated. In the following step, alternative solutions to the functions of the fixtures are developed and evaluated. In particular, possibilities of subsequent manipulation of the components based on process and measured data evaluation (digital shadow) should be considered.

Requirements:

– motivation and high commitment
– independent work
– interested in topics of production of electric mobility
– ideally experience in automotive assembly or toolkit development

Offering:

– Extensive supervision
– Defined task
– Fast realization
– Autonomous realization of an exciting project
– Cooperation in a research topic with promising future

Have we awoken your interest?

Please send your current transcript of records and curriculum vitae to the e-mail address listed below.

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Projekt-, Bachelor- oder Masterarbeit
Increase of body in white geometrical accuracy through component integrated features