



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

Problem Description (High Level)

Tolerance Monitoring System



Context

The major joining technology in automotive body in white is resistance spot welding because it is

- Cheap
- Reliable
- Save

High production quality is required, also if production boundary conditions change

The need for documentation of production data is increasing,

At the moment, quality inspection is done randomly by chisel test or ultrasonic inspection. Furthermore, destructive tests are carried out. These methods are time intensive, costly and often not reliable.

Industrial needs

A system for quality control and documentation. The systems capabilities should cover:

1. 100% quality control of each spot
2. Long-term online monitoring of the spot quality in order to identify process drifts
3. Documentation of the spot quality in a database
4. Offline analysis capabilities