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Reverse engineering and inspection in digital factory

Friday, 19 April 2024 12:45 (45 minutes)

Syllabus outline:

1. What is reverse engineering and difference with inspection (5 minutes)
2. Review of technologies for reverse engineering (15 minutes)
3. Technologies for automated inspection in coordinate metrology (5 minutes)
4. Capabilities, advantages, constraints and limits of optical systems for reverse engineering and inspection (10 minutes)
5. Practical case of part reconstruction and modelling (10 minutes)

Objective competences:

Comprehensive overview of the different sensors for reverse engineering and coordinate based inspection.

Knowledge about limits and advantages of sensors.

Basic knowledge about the actions for preparing, scanning and post-processing a part in reverse engineering and inspection.

Practical simulation of a case.

Intended learning outcomes:

To know the map of technologies used in 3D scanning of parts.

To understand the working principle of optical sensors for reverse engineering or inspection in a digital factory.

To understand the benefits of using reverse engineering for reconstruction of parts in a competitive world-class context.

To understand the process steps when scanning a part for geometry modification or inspection

To understand the strong link between reverse engineering and additive manufacturing

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