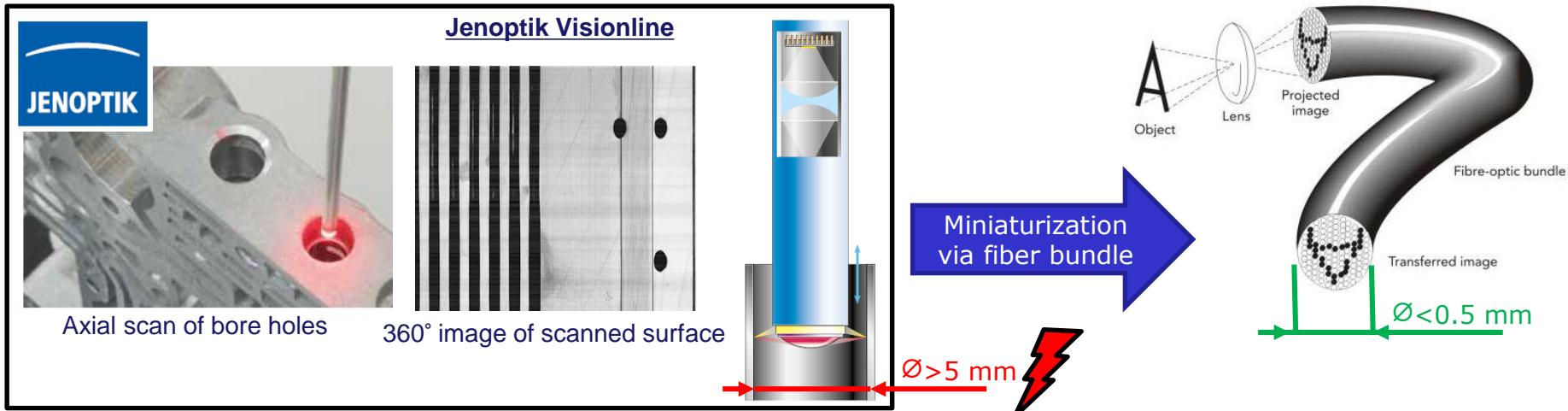


Miniaturized fiber endoscopy for fluid channel inspection



Motivation

To guarantee safety and optimal flow conditions in hydraulic and pneumatic engines, fluid channels must be free of damages and fabrication errors.

For quality control automation, optical inspection systems, such as the Jenoptik Visionline are employed. However, such systems are not suited for small channel diameters.

The sensor diameter shall therefore be reduced by imaging with fiber bundles and microoptics.

Tasks

- Design and simulation of a miniaturized prototype
- Characterization of optical properties

Key words

Endoscopy, Zemax, microoptics

Kontakt

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