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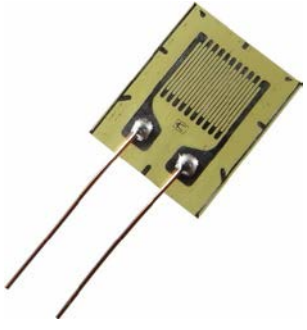
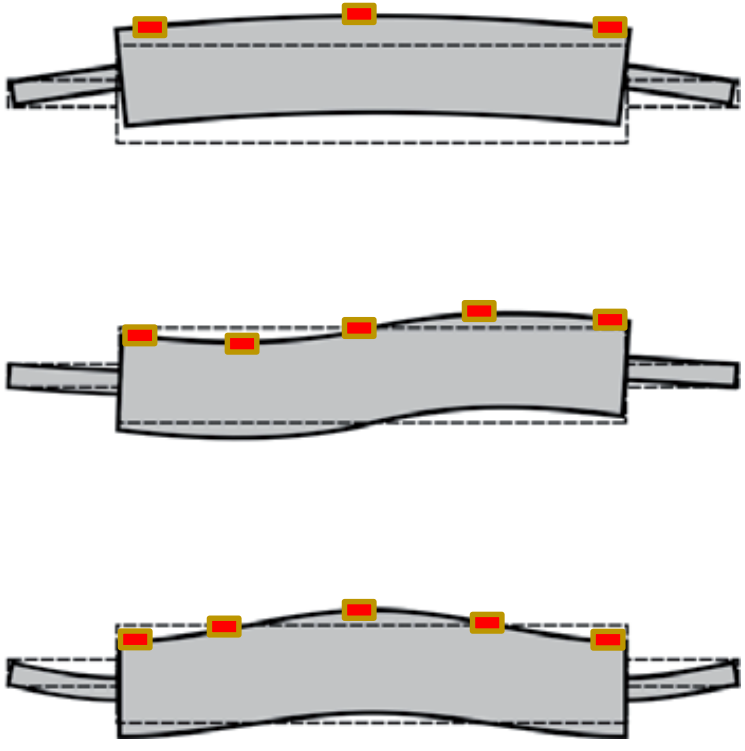
Vibration measurement of a rotor utilizing strain gauges

Project in virtually

=Strain gauge





Project tasks

1. Build a test bench, which includes a rotor, electric drive, measurement equipment etc.
2. Mount and connect strain gauges (wireless system)
3. Design a measurement program (labview?)
4. Find correlation between measured data and the movement of a rotor. Results can be validated with laser.
5. At the end of the project you have a device, which can measure movement of the outer surface of the rotor in different sections

Motivation

For example…

in the paper industy, there is hundreds of paper machine rolls forming the paper.

The movement of the outer surface of a paper machine roll affects directly to the paper quality. The movement is copied straight to the paper.

Questions?

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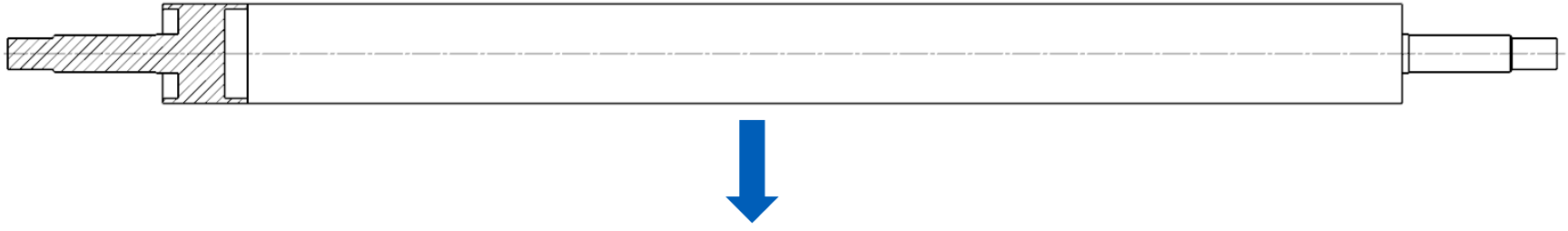
Loading device for a paper machine roll to simulate paper track

Case



Tasks

1. Build a functioning loading mechanism (pneumatic?)
2. Design control system, which can change the developed force of the device
3. Implement the device to a paper machine roll in K4 building

Questions?