Project description

Project manager – Optical in-situ measurement

An optical in-situ monitoring of rapid pressure changes should be developed for industrial applications in a difficult environment. This is based on a Bragg grating in a glass fibre. The laser wavelength was controlled on the grating. A change in the lattice constant caused a variation in the light reflection.

We designed this method as part of a CTI project with EMPA in Thun. In addition, we developed an evaluation algorithm based on machine learning.

The test with a prototype has proven the suitability of this method.

Objectives and key figures

- ✓ Project accepted by Innosuisse
- ✓ Team worked efficiently and independently
- ✓ New technical approach (fibre optics and acoustics)
- ✓ Exceeded requirements of the specifications
- ✓ Costs below budget
- ✓ A patent pending

February 2014 – February 2017

Budget 1’300’000 CHF

Five team members

Mechanical engineering and electrical industry

Patent application
WO2017214738A

Testimonial

«He (Reinhard Müller-Siebert) was very professional and competent. The project ran on time, on budget and was considered by all parties as a success.»

Kilian Wasmer, Head of Processing Dynamics Group – EMPA