



WILL THE EXISTING CEILING BEAMS SUPPORT A ONE-FLOOR EXTENSION?

In just a few hours, we provided a clear and reliable answer to whether it is possible to add another floor.

Using FBG sensor technology, we have replaced the information from the missing technical documentation.

ABOUT THE CLIENT

- ▶ a giant in the e-commerce market with more than 2000 employees throughout the EU
- ▶ a recognized innovator in the field of internet sales with a turnover of tens of billions of CZK

INITIAL STATE OF BEAMS

- ▶ more than 30 years old, TT cross-section
- ▶ the percentage of reinforcement or the location of the reinforcement was not known

CLIENT EXPECTATIONS

- ▶ use a deformation test to demonstrably determine the highest possible load on the beams

BENEFITS OF THE SOLUTION



Monitoring will not interfere with the routine operation of the company

The entire process, including testing and evaluation, takes place outside the building



Significant savings in time and personnel costs

The result within 24 hours rather than 10 man-days



We guarantee data accuracy

Technology allows installation of multiple sensors for accurate measurements



SOLUTION

The measurement was carried out on physically removed beams and took less than 10 hours. For verification, we used stable and other external influences insensitive FBG fiber optic sensors while gradually loading beams with reinforced concrete blocks weighing 35 tons.

The measurements confirmed that the other built-in beams could also handle the load. And the client thus got the green light for the new floor.



GALLERY



WHY WORK WITH US?

Our company was invited to the project thanks to its professional expertise and experience in providing accurate and reliable data for numerical model validation.

We work with fiber optic sensors we manufacture to monitor the stability of buildings and roofs, or to determine the maximum loading. The calculations are based on state-of-the-art numerical modeling approaches. Thanks to this, we always guarantee the reliability of our solutions.



FBG technology is the most suitable solution where conventional procedures fail or are not viable because of routine operation.



Electrical wiring in bundles changes the structure of concrete, which then might not have the same load capacity in all places.



It can happen that a large number of electrical sensors will stop working due to wear or weathering. This results in additional costs. High durability and reliability are the characteristics of fiber optic technology.

GET IN TOUCH WITH US
and we will recommend you the most suitable
solution for your project.

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