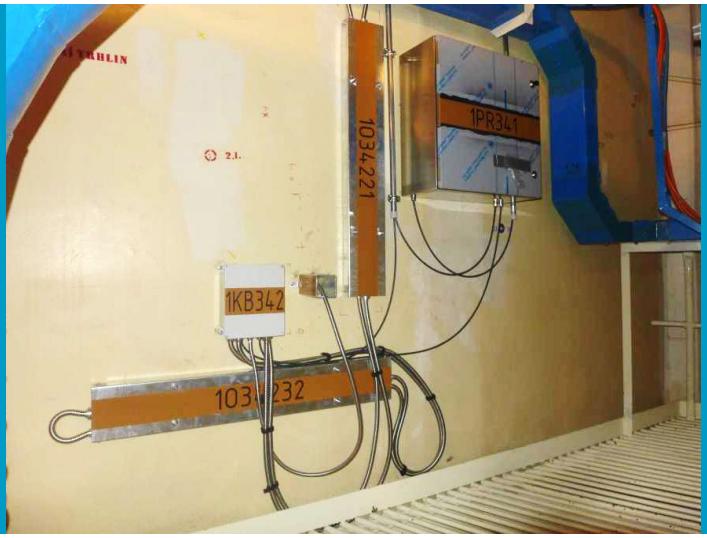
NUCLEAR RESEARCH INSTITUTE

Investment Projects and Business Development Department
Integrity and Technical Engineering Division



CONTAINMENT DEFORMATION MONITORING SYSTEM

Interior fiber-optic sensors for containment deformation monitoring system

Value for customers

- Replacement of old gauges embedded to containment wall with a new equipment using fiber-optic sensors for strain and temperature measurement

Applications

- The method of containment deformation monitoring can be used as a part of design or additionally installed measurement
- The most suitable applications are reinforced concrete structures such as containments, dams, bridges, chimneys, including their anchoring
- Advantages of optical-fiber sensors:
  - Dielectric - no external effects, no electromagnetic wave generated
  - Passive - no need for external power source
  - Long-distance connection with control unit (kilometers)
  - High accuracy and long-term stability

What we offer

- Design of a solution for long-term stable and periodically calibratable measurement

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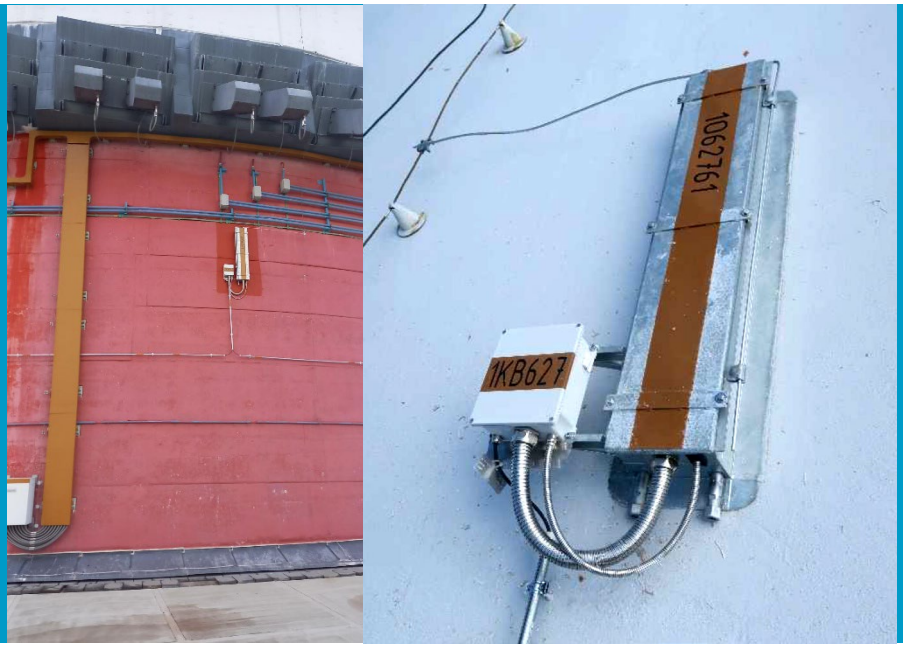
- Installation of interior and exterior fiber-optic sensors
- Possibility of remote monitoring and evaluation of measurement data
- Possibility of connecting the measurment system to remote calibration (verified over hundreds of kilometres)

Our references

- Developed under financial support of the Czech Ministry of the Interior with the following partners Institute of Scientific Instruments of the ASCR, v.v.i. and NETWORK GROUP, s.r.o. in 2018
- Replacement of containment deformation monitoring system for both VVER1000 Temelin NPP units (implementation in 2020 – 2024)



Exterior fiber-optic sensors for containment deformation monitoring system