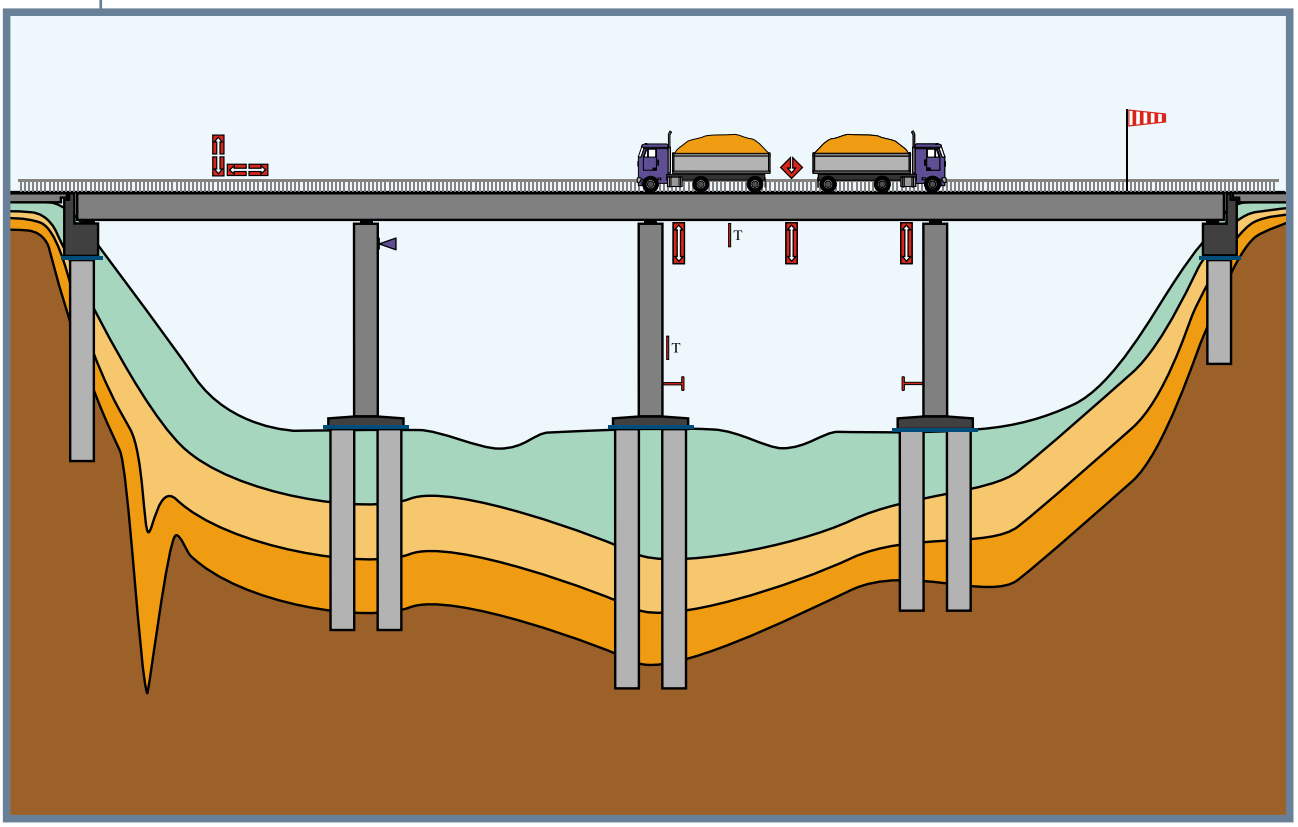
BRIDGES

Bridge structure diagnostics

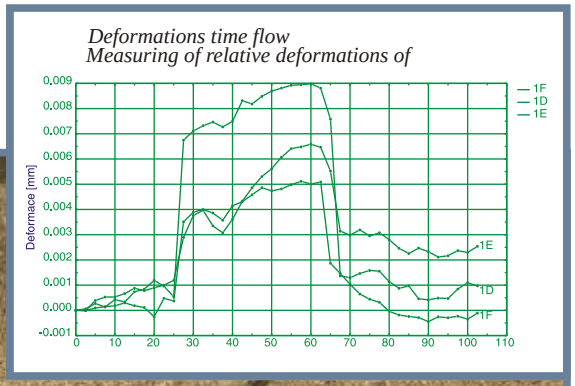


Legend

- Tilt measurement point perpendicular
- Deformation measurement point, automatic measurement uniaxial
- Shift sensor
- Levelling point
- T — Temperature sensor
- Wind direction and strength measurement
- Vibration sensor triaxial

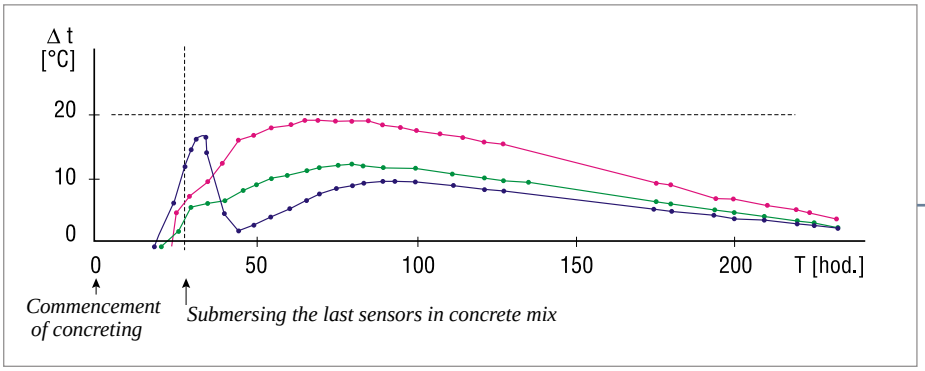
Bridge structure diagnostics:

1) Tilt measurement of bridge supports
2) Detection of armature position within the bridge structure
3) Assessment of corrosion of metal armatures
4) Non-destructive concrete tests using Schmidt test hammer
5) Core bores
6) Detection of cavities and loosened areas behind lining of e.g. old arch bridge
7) Measurements of relative transformations of bridge structures



Inductive deformation sensors

8) Measurements of concrete hydration temperatures



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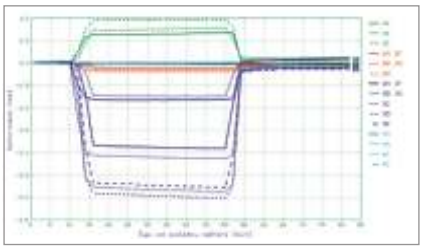
9) Static bridge load tests in accordance with CSN 73 6209
10) Dynamic bridge load tests in accordance with CSN 73 6209
(vehicle drive over, modal analyses with vibration exciter,
response to special types of excitation)

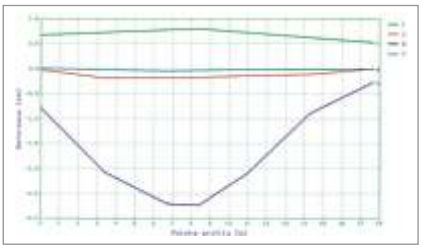
Deflection sensor

An array of sensors in the measured cross section

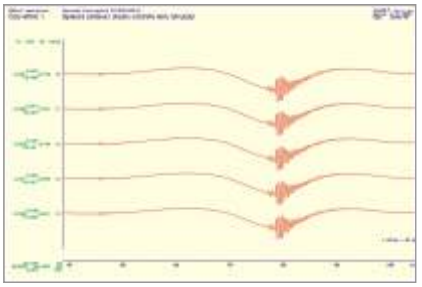
Data collection



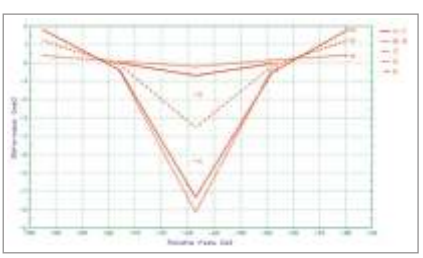
Static bridge load test symmetry, time development of deformation at individual points of measurement



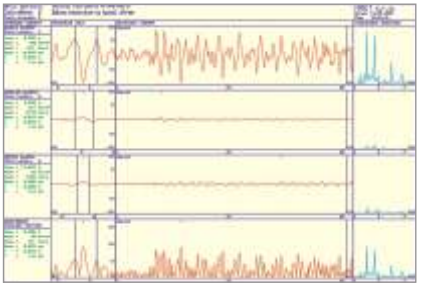
Static bridge load test symmetry, time development of deformation in cross-sections of the bearing structure



Dynamic bridge load test



Static bridge load test non-symmetry, time development of deformation in longitudinal sections of the bearing structure



Bridge structure response to excitation by wind

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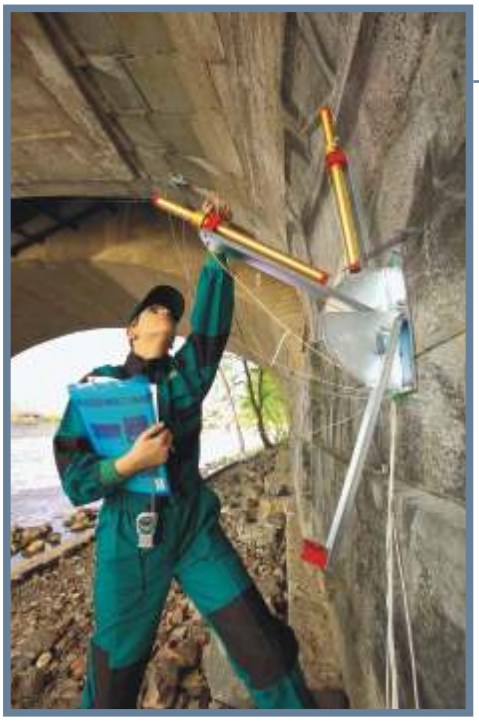
Preparation of a loading test

Checking of sensors



Geodesic surveying

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