



research bridges railways tunnelling monitoring technology management international

## Footbridge Praha Chodov

The footbridge Praha Chodov is situated in the south-east of Prague and leads across the motorway D1 from Brno to Prague. The bridge - built in 1994 - acts as a symbolic entrance into the capital city of the Czech Republic. In 1995 the footbridge Praha Chodov was assigned as „bridge construction of the year“. The structure consists of a steel box-girder with an orthotropic deck and a bottom plate and is supported on a steel arch over a distance of 49.50 m. Additionally the deck is hinged into the arch with two assemblies of 6 thin-walled and prestressed steel hangers.

In the course of the prevailing investigation a dynamic monitoring campaign was undertaken in order to determine the vibration behaviour of the steel hangers and the global condition of maintenance of the bridge deck (the structure’s integrity) by means of BRIMOS®.

The superior goal of the prevailing monitoring campaign was the determination of the effective prestressing forces in each of the 12 hangers – based on dynamic measurements. The obtained values were compared to the expected, theoretical values based on permanent loading and live loading. Additionally the utilisation ratio with regard to the load bearing capacity of the hangers was determined. Along with the conventional bridge inspection the assessment of the bridge based on the measured dynamic behaviour of the steel hangers and the bridge deck supports the determination and localization of the structure’s weak points or areas.

- Client: AGIP s.r.o.
- Location: Prague, Czech Republic
- Checking Period: 2006



### BRIMOS® Services conducted:

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|------------------------------|--|---|---|--|
| <b>Lifecycle Management:</b> | <input checked="" type="checkbox"/> Condition Assessment | <input type="checkbox"/> Condition Monitoring | <input type="checkbox"/> Rehabilitation Planning  | <input type="checkbox"/> Quality Control |
|                              | <input type="checkbox"/> Lifetime Assessment             | <input type="checkbox"/> Traffic Analysis     | <input type="checkbox"/> Environmental Influences | <input type="checkbox"/> Risk Assessment |
| <b>Special Measurements:</b> | <input type="checkbox"/> Attendant Monitoring            | <input type="checkbox"/> Noise and Vibrancy   | <input type="checkbox"/> Deflection Measurements  | <input type="checkbox"/> Seismics        |