

KLIMKOVICE TUNNEL

Technical assistance

Country: Czech Republic

Client, year: Solel Bone International CZ - 2001

Client, year: Metrostav a.s. - 2004



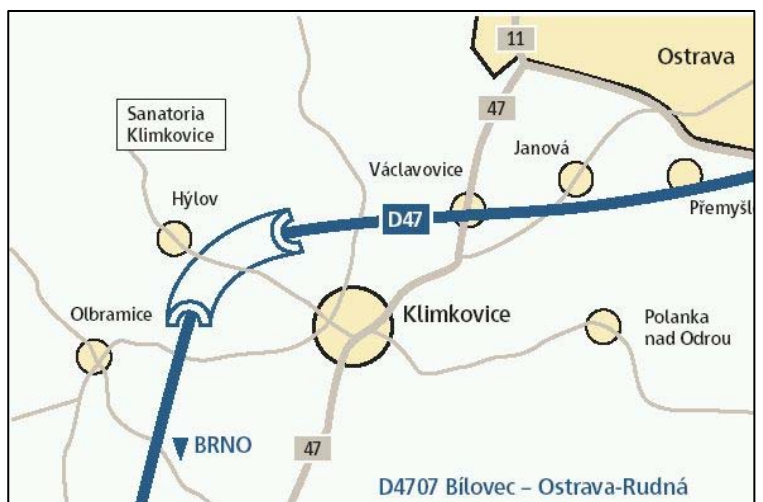
Project Description:

The Klimkovice tunnel forms part of D47 motorway between Bílovec and Ostrava Rudná. The main purpose of the tunnel construction was a protection of the nearby Klimkovice-Hýlov spa with curative springs against the impact of road traffic. The tunnel has two 2-lane tubes with gradient 0.6%. The tubes are 1080 m long, 865m is mined section and 220 m is cut and cover section. Both tubes are connected with 5 cross passages designed for an emergency escape. In a central cross passage area 40 m long lay-bys were designed, this cross passage is connected with the surface via a vertical shaft. Design speed within the tunnel is 80 kph. The rock mass was formed by flysch development - variation claystone and sandstone layers, maximum overburden is only 25 m. NRTM excavation was split into top heading, bench, and invert. The final was designed from in-situ cast reinforced concrete with polypropylene fibres and with final coating protecting the lining against the effects of chemicals used for winter road maintenance.



Project contribution:

D2 Consult provided technical assistance to the client during preparation of construction. Moreover D2 Consult also assisted to constructor to evaluate geotechnical conditions.



Activities:

- ◆ Tender documentation check
- ◆ Evaluation of geotechnical conditions
- ◆ Rock mass classification (QTS, RMR, Q)
- ◆ Alternative design of support classes
- ◆ Economical evaluation of the project cost
- ◆ Suggestions for cost reduction