Katzenberg, Germany

Invert concrete installation

Rowa’s order
The assignment for the development, production and supply of an invert concrete installation for the project Katzenberg tunnel Germany was given to Rowa on May 10, 2005 by the joint-venture Katzenberg tunnel, Efringen-Kirchen.

About the Project
To realize the first phase of the NEAT (Loetschberg base tunnel, probably in 2006/2007), the German side plans the completion of the Katzenberg tunnel by 2007/2008. At present, construction measures are concentrating on the appr. 9.4 km long tunnel in the partial section from Schliengen to Eimendingen, comprising the biggest construction part of the project “Expansion- and Reconstruction Route Karlsruhe – Basel”.

Construction of the two-tube train tunnel at the Katzenberg (Bad-Bellingen to Efringen-Kirchen) with a length of 9.4 km will be carried out mainly with tunnel headings. The tubes are connected with each other every 500 meters through cross shafts. Only at the North and South portals (286 meters in the North and 115 meters in the South respectively) are open tunnel constructions performed. With 2x8.984 m, the Katzenberg tunnel will become Germany’s first machine-made and longest underground construction.

Project data

<table>
<thead>
<tr>
<th>Country</th>
<th>Germany</th>
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<tbody>
<tr>
<td>Execution</td>
<td>2003-2008</td>
</tr>
<tr>
<td>Builder</td>
<td>Deutsche Bahn AG</td>
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<tr>
<td>Customer</td>
<td>Arge Katzenberg tunnel, Efringen-Kirchen</td>
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<td></td>
<td>E. Züblin AG, Wayss &amp; Freytag Ingenieurbau AG, Marti Tunnelbau AG, Jäger GmbH</td>
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<tr>
<td>Tunnel length</td>
<td>9385 m</td>
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<tr>
<td>Tunnel cross section</td>
<td>ca. 90 m²</td>
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<tr>
<td>Inside diameter</td>
<td>9.4 m</td>
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The Concept

The invert concrete produced at the construction site is being transported to the installation area with special vehicles of 15 m³ transportation volume each.

The horizontal conveyor transports the concrete to the movable platform where it is picked up and distributed over the floor with a swinging conveyor. An independent platform and vibrating beams assure that the surface is leveled according to plan and precise quality requirements.

With this system, concreting stages of up to 34 m length can be realized in a very short time. Tunnel variations of up to 25 cm vertically and 76 cm horizontally can be tolerated and rectified.

Scope of delivery

Two complete invert concrete installations.

Concreting car

- Horizontal conveyor of von 42 m
- Distribution conveyor of 6 m
- Planing and vibrating beams

Longitudinal timbering carriageway

- für 2x34 m concreting stages

Technical data

Max. Concreting stage 34 m

Transportation capacity

Finished concrete 180 t/h
Spread width up to 55 cm

Drive
2 Electrical cable winches