



East portal Gmünder Einhorn-Tunnel



Breakdown bay Gmünder Einhorn-Tunnel



Smoke extraction flap in the calotte



Barrier system in the West apron

Description

The Gmünder Einhorn-Tunnel in Schwäbisch Gmünd is part of the new construction of the federal road B 29 between Aalen and Stuttgart and is operated in two-way traffic.

It consists of a tunnel pipe with a length of 2,230 m and a parallel rescue tunnel as well as two emergency staircases. The tunnel, which is passed on two lanes by up to 20,000 vehicles per day serves as bypass to protect the residents from harmful gases and noise.

In case of a fire, the axial fans of the exhaust air station are activated for the smoke extraction. Five smoke extraction flaps directly above the fire site are opened, and the smoke extraction is turned on. The rescue tunnel and the emergency staircases are ventilated by means of overpressure ventilation systems.

The technical traffic equipment corresponds to the extended equipment according to RABT 2006. Normally, the admissible maximum speed is 80 km/h.

Services

Within the commissioning, the first inspection was carried out by HBI Consulting Engineers as the investigating body on the basis of the current Guidelines for the Equipment and Operation of Street Tunnels (RABT 2006).

The inspection was realized in the form of a safety inspection and functional tests before the commissioning. The tests were conducted on the basis of the Alarm and Hazard Prevention Plan (AGAP). The tests were supposed to make sure that the equipment and operation of the tunnel are in line with the requirements of RABT.

The result was established in the form of requirements of measures to increase the safety of the tunnel. With respect to the functionality of the facilities relevant to traffic and safety, rework/optimizations have been realized. Then the tunnel was opened for traffic in November 2013.

The planning, execution and the results were subsequently documented in a safety expert opinion.