



South portal of the Luise-Kiesselbach-Tunnel



Eastern tube of the Luise-Kiesselbach-Tunnel



Exit ramp towards Federal Highway A95



Jet fan group located in the Heckenstallertunnel

Description

The inauguration of the Luise-Kiesselbach-Tunnel (LKT) and of the Heckenstallertunnel (HST) in July 2015 represented the completion of the infrastructure projects on the Mittlerer Ring in Munich. The two tunnels carry a daily traffic load in excess of 100'000 vehicles. Each tunnel consists of two parallel tubes with a length of 1'500 m resp. 600 m. Several entry and exit ramps allow access to the federal highway A95 and to the urban road network.

The M&E equipment ensures smooth and safe traffic flow in the tunnels. The City Council emphasises the importance of tunnel safety. Therefore, the safety installations considerably exceed the requirements of the German national standard RABT-2006.

The tunnel ventilation system is of longitudinal type with a capacity of 58 jet fans (LKT) and 34 jet fans (HST). The jet fans have a nominal diameter of 630 mm. As control parameters, the tunnel ventilation uses measurements of air quality and air flow velocity in each tunnel section. In order to ensure maximum reliability, additional sensors have been installed. Part of the control system continuously checks the air flow signals for plausibility. By this routine, faulty sensors would be detected automatically.

Services

HBI Haerter Consulting Engineers provided the following services:

- Feasibility studies: options for tunnel ventilation and pollution dispersion in the vicinity of the tunnel
- Tunnel ventilation concept design
- Air dispersion calculation as part of the project approval process
- Tunnel ventilation final design
- Definition of technical requirements for the ventilation equipment
- Approval of air flow measurements during commissioning
- Ventilation control system functional description
- Ventilation control system tests during commissioning