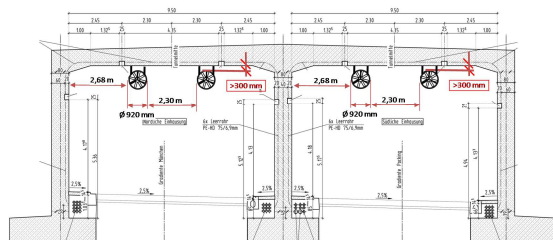


Emission coefficients for CO and opacity according to standard RABT-2006



Jet fans with attenuators slanted by 7°



Jet fan arrangement in ceiling niches

## Description

The Wimpasing Tunnel constitutes part of the under construction German autobahn BAB A94 between Munich and Pocking. The 670 m long twin-tube tunnel will serve as a road bypass for the city of Ampfing. The tunnel will be used for uni-directional traffic on two lanes per tube. The predicted traffic volume is 46100 vehicles per day.

The tunnel ventilation will be of longitudinal type with twelve jet fans. The jet fans are made from stainless steel and have a nominal diameter of 710 mm. On pressure and suction side, they are equipped with attenuators slanted by 7° from their normal axis towards the tunnel. Due to this special jet fan design, the fan thrust in the tunnel is significantly increased.

In normal operation, ventilation control is driven by air pollution monitors in the tunnel. The ventilation modes are predefined in distinctive steps triggered by control limits of measured CO level and opacity. In case of a tunnel fire, the number of jet fans used depends on the fire scenario. These scenarios are defined by fire location and traffic situation, i.e. free flowing or congested. In the non-incident tunnel, the mechanical ventilation is operated against normal traffic direction in order to achieve air flow towards the entry portal and avoid smoke intake there.

## Services

- Design of tunnel ventilation concept, including qualitative evaluation of fresh air requirement
- Tunnel ventilation detailed design and bill of quantities
- Equipment technical description and tender documentation
- Tunnel ventilation control system (TVCS) detailed functional description as well as participation in fire tests