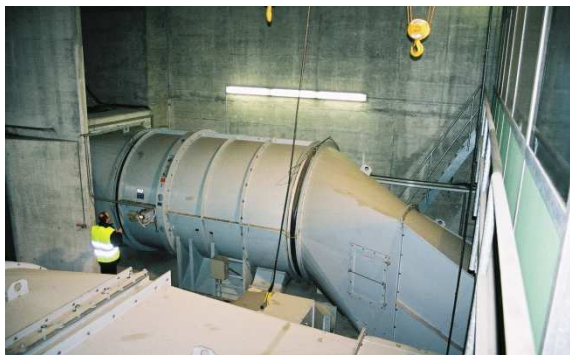




Loppertunnel (CH) Retrofit of ventilation systems



Northern Portal of the Loppertunnel



Exhaust fan prior to refurbishment



New high temperature resistant smoke extraction fans.



Smoke extraction tests in the Loppertunnel

Description

The Loppertunnel is a single tube two lane bi-directional road tunnel and has been opened in 1984. The length of the tunnel is 1600 m. On one end an exit ramp leaves for the recently opened Kirchenwald-Tunnel of the A2 motorway heading to Gotthard.

A general retrofit was undertaken in the years 2005 and 2006 including a complete redesign of the ventilation and safety systems.

During the whole time of refurbishment works the tunnel was available for vehicle traffic at least in one direction.

The original distributed exhaust system was re-constructed to a single point smoke extraction system comprising 2 new exhaust air fans connected to 13 remote controlled smoke extraction dampers. During normal operation a much more energy efficient longitudinal system is driven by the 14 new jet-fans, now mounted in the northern part of the main tunnel and in the ramp.

On schedule the newly refurbished Loppertunnel was opened for all traffic on April 7th 2006.

Services

HBI Haerter Consulting Engineers is responsible for the analysis, the new concept and the requirements for a sophisticated control system, not only controlling the Loppertunnel's ventilation system but also that of the new Kirchenwald-Tunnel and its interconnections.

The tendering of all plants and components have been conducted by HBI and HBI's experience was also valuable to support the customer in choosing able and cost efficient contractors and suppliers.

HBI's specialised site manager for ventilation and smoke management systems was also involved in the management and the minimisation of the closure periods. He has been on site whenever needed.

All components, plants and control systems were commissioned by HBI within a tough time schedule including a wide range of factory and site acceptance tests.