

**Installation of FireBarrier 135 to protect the Emergency Refuges in the Mont Blanc Tunnel against fire**



39 emergency refuges were installed throughout the entire Mont Blanc tunnel as part of the refurbishment program following a major fire. These refuges provide a safe area to which people can be evacuated in the case of a fire, offering shelter from the fire and a safe means of escape from the tunnel.



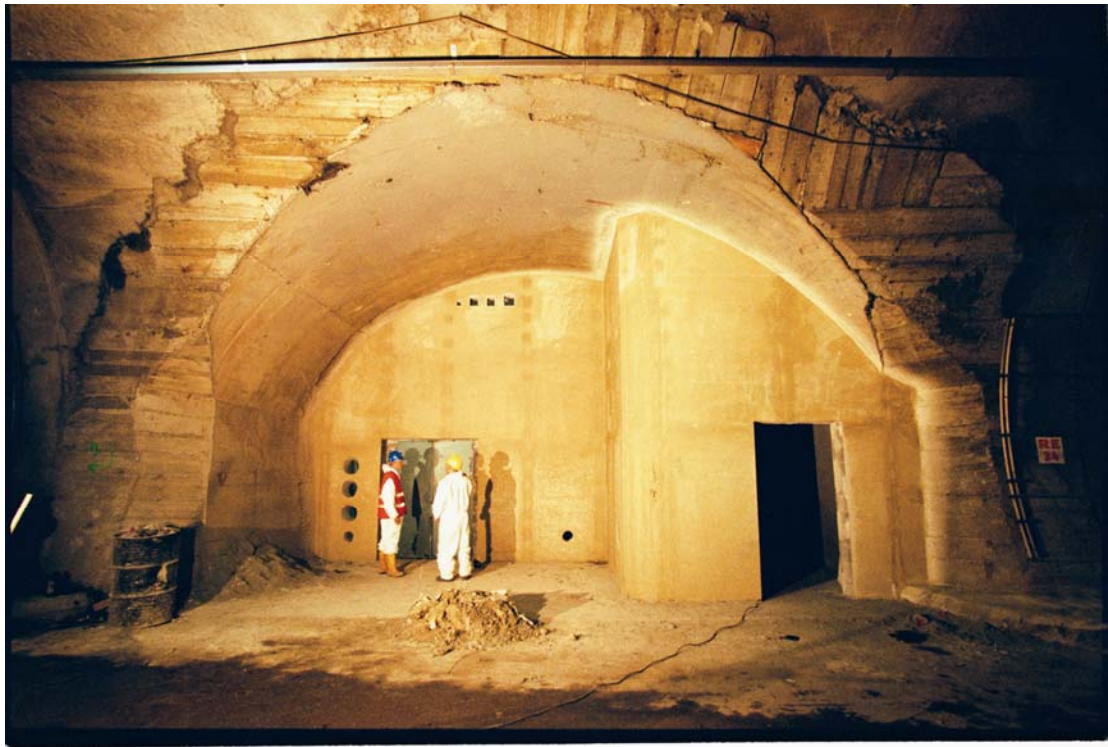
The refuges are built into the rock adjacent to the tunnel and are built from blockwork brick onto which FireBarrier 135 was sprayed to provide fire protection.

Two different levels of fire protection were required for the refuges:

1. Protection to prevent the inside wall of the refuge from exceeding 60 °C for four hours when subjected to the ISO 834 fire curve.
2. Protection to prevent the inside wall of the refuge from exceeding 60 °C for two hours when subjected to a hydrocarbon fire of 1300 °C (the "HCM" fire curve).

Maintaining the wall temperature at 60 °C provides a safe environment for people inside, allowing them to escape through the evacuation route connected to the refuge.

To achieve this high-performance fire protection 42mm of FireBarrier 135 was applied to the walls of the shelter after extensive fire testing to prove its performance in the specified fire scenarios.



The FireBarrier 135 lining was installed in one single layer directly on the walls without the need for anchors or reinforcement mesh.