



INNOVATIVE. FIRE. SYSTEMS

PASSIVE. FIRE. PROTECTION

L'EPINE TUNNEL (North Tube) – A43



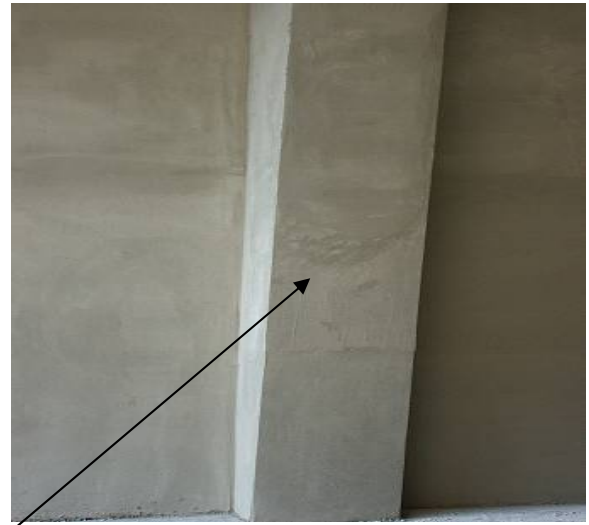
FIRE PROTECTION for the VENTILATION PLANT

To meet the requirements of French circular N° 2000-63 of 25 August 2000, the Tunnel owner **AREA**, assisted by the engineering **INGEROP**, wanted to improve the fire resistance of the ventilation plant by protecting the concrete structure with a sprayed mortar guaranteeing level N3, i.e. HCM 120 & CN 240 insulation. This work was performed from June to October 2005.

The shaft plates were constructed with 75 mm of FIRE BARRIER 135, as well as the cable troughs and shafts between rooms.

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FIRE PROTECTION LEVEL N2 and N3
28 mm of FIRE BARRIER 135



MORTAR with SMOOTH READY-TO-PAINT FINISH

FIRE STOP TREATMENT N3
in SHAFTS and CABLE TROUGHS

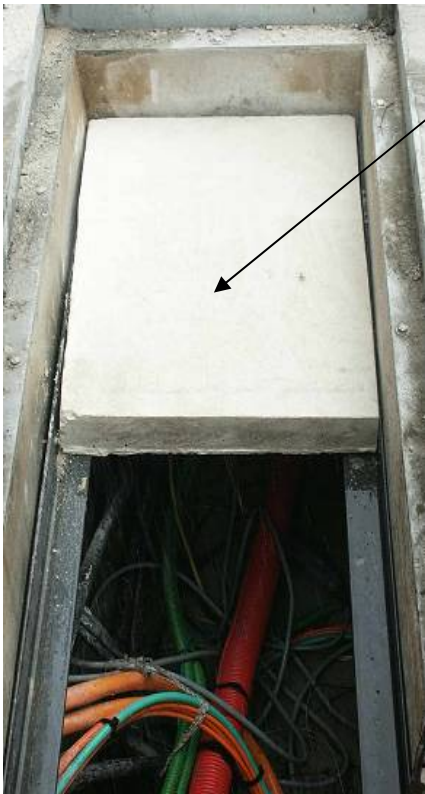


PLATE with 75 mm of
FIRE BARRIER 135 to
guarantee a temperature lower
than 80 degrees and Level N3

SHAFT CLOSURES made with
3 cm REFRACTORY FACING,
COVERED with 28 mm of FIRE
BARRIER 135

