



**INNOVATIVE FIRE SYSTEMS.**  
**PROTECTION PASSIVE INCENDIE**

## **LA DEFENSE TUNNEL**

### **COMPLEX A14 x A86**

**FIRE PROTECTION for EXHAUST AIR DUCTS**



The Contracting authority, DIRIF, has launched a programme to renovate 22 tunnels in the Ile de France region and the SPIE/Bouygues/SETEC/Axima-Seitha/SDEL group has been contracted to perform work to improve the safety of complex A14/186 in the La Defense district, extending as far as Nanterre.

Throughout the length of the 2 tunnel tubes extending over 4 kilometres, different ventilation plants provide fresh air intake and evacuation of exhaust air. These exhaust air ducts will be protected against fire with N1+, N2 and N3 degrees of isolation, and 250 and 400 degrees interface temperature.

Sprayed mortar is the product which best meets the site configuration, providing great flexibility in application, but, above all, meeting the contracting authority's needs, particularly with the following technical performances:



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**PASSIVE FIRE PROTECTION**

1. 17 previous fire tests on FIRE BARRIER 135, performed in five different laboratories (TNO, CSI, CSTB, SINTEF, SP) respecting French regulation fire curves (HCM 120, CN 240) on several types of concrete (35 to 76 Mpa), and hollow blocks.
2. Fatigue test 50 million cycles (pressure drop: 1.97 kPa, pressure: 1.56 kPa)
3. Erosion test in air - 25 m/s for 4 hours corresponding to CN 240
4. High pressure washing test - 150 BAR at 50 cm for 1 minute
5. Accelerated ageing test
6. Strength test: carbonatation / alkalis
7. Freeze / thaw test (20 cycles)
8. Test for non-combustibility with an aqueous coating



INNOVATIVE FIRE SYSTEMS will carry out the operation with its subsidiary ISOLATION FEU SERVICES from 15 November 2010 to the end of 2011 over more than 30 000m<sup>2</sup>

INNOVATIVE FIRE SYSTEMS, the exclusive global distributor of FIRE BARRIER 135 since May 2003, has already signed more than 35 contracts for supplying and laying in tunnels in France, Spain, Monaco, Italy and Egypt, and more recently in Norway.