



INNOVATIVE. FIRE. SYSTEMS
PASSIVE. FIRE PROTECTION

RATP TUNNEL

EXTENSION OF LINE 4 – MONTROUGE TOWN HALL



FIRE PROTECTION – TUNNEL EXTENSION PORTE d'ORLEANS

The RATP has commissioned a market study of the level of fire protection in the existing tunnel which is to be connected to the new tunnel as part of the extension of line 4 of the Porte d'Orléans metro line to Montrouge town hall. The project is subject to the requirements of the order of 22 November 2005 concerning safety in tunnels used by public transport systems. The study is intended to define the fire resistance of the existing structure and propose technical solutions intended to meet the above-mentioned requirement.

There are several levels of operating difficulties, to ensure continuity of fire resistance using equipment of varying quality: refractory bricks, metal frameworks, cast iron, cast in situ concrete, unsealed deteriorated lime. The system to be recommended must also meet a minimum clearance requirement to be respected for the new MP 89 equipment.

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Own fire resistance: cast in situ concrete is estimated at 30 minutes not knowing the coating used for the steel.

Recommendation: support preparation by high-pressure washing, application of refractory mortar sprayed 10 mm thick to guarantee 120 minutes of fire proofing according to ISO 834 fire standard, or 15 mm thick sheets of sand-lime



Own fire resistance: brick jack-arches: estimated at 30 minutes not knowing the composition of the bricks and mortar used for joints.

Recommendation: support preparation by high-pressure washing, application of refractory mortar sprayed 10 mm thick to guarantee 120 minutes of fire proofing according to ISO 834 fire standard, spraying to follow the contours of the arch as closely as possible

Own fire resistance: riveted metal section: estimated at 15 minutes

Recommendation: support preparation by fitting Nergalto type reinforced mesh to avoid sand-blasting; application of refractory mortar sprayed 15 mm thick to guarantee 120 minutes of fire proofing according to ISO 834 fire standard.

