

NEW BARRIERS FOR TH

For the enclosure of one of ancient Rome's largest and most important triumphal arches, technicians opted for the wrought iron technique, still a familiar and widely practised, traditional method.

The 2000 Millennium gave the Italian capital the opportunity to undertake important restoration and repair on monuments and historical sites and to lend new impetus to various archaeological projects. In the Imperial Forums quarter the Constantine Arch is just one of the famous structures to have benefited from the initiative. Lying just a short distance from the Coliseum, the Arch has had its unique, historical setting enhanced with a new, wrought-iron border. Commissioned by Rome's archaeological supervisory committee for the Ministry of Cultural Patronage and Activities, the new gating was designed and installed according to the standards and classic style characteristics of the Boranga Artistic Forge of Treviso. This workshop has long been recognised for its stylistic versatility and domaine-specific know-how in construction.

For the perimeter fence of the Arch, one hundred metres of metal barrier were prepared along with two iron gates: the iron spear-like bars were 25 mm wide, three metres high, finished off with outward facing spikes and held together by horizontal bars. These connecting rods were cut from iron of the same thickness as the vertical bars but wider at 40 mm. The framework bars were wider still at 50 mm, and they too were forged to 'point' away from the central Arch.

All of the components for the fencing were assembled for maximum aesthetic appeal with linkages rather than



THE CONSTANTINE ARCH

welding, according to the classical design principles of wrought-iron engineering. The fencing was then mounted upon a concrete wall and at the end of the fixing process technicians moved on to the refurbishment of the foundation bed. With Mapei's MAPEGROUT THIXOTROPIC* the repair team was able to rebuild areas which had been chipped

or cracked, mend sections in contact with the iron and square up corners and rough edges on the base wall (photos 1 and 2). MAPEGROUT THIXOTROPIC* is a ready-mix powder composed of high-strength cements, selected aggregates, special additives and synthetic fibres made according to a formula developed in the Mapei research laboratories. Thanks to its unique properties this is a product which lends itself to the repair of surfaces subject to heavy abrasions and it may also be applied to vertical surfaces without sagging even in great thicknesses and with no need for formwork. For the smoothing of superficial unevenness and the final polishing process, MAPEFINISH* was the chosen product (photo 3). MAPEFINISH* can be applied to a 2-3 mm depth.

PM

**The technical Data Sheets of the products mentioned in this article are contained in Mapei binder No. 3 "Building Line".*

Mapefinish:

Two-component cementitious mortar for finishing concrete surfaces repaired with Mapegrout and for smoothing uneven concrete surfaces.

Mapegrout Thixotropic: Fibre reinforced thixotropic grout with controlled shrinkage for the repair of concrete.



TECHNICAL DATA

The Arch of Constantine, Rome - (Italy) 315 DC

Operation: preparation and installation of wrought-iron gate.

Year of renovation: 2000

Client: Archaeological supervisory committee - Ministry of Heritage and Culture, Roma.

Project/architect of gating: Boranga Artistic Forge, Montebelluna (TV)

Mapei products used:

MAPEGROUT THIXOTROPIC, MAPEFINISH

Mapei co-ordinators:

Renato Soffi and Pino Mancini



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