



Photo: Omega Fotocronache

ONE OF THE MOST FAMOUS STADIUMS IN THE WORLD OFFICIALLY REOPENED THIS YEAR

A BRAND-NEW W



Wembley Stadium is one of the most famous football grounds in the world. The original construction was built for the 1924 British Empire Expo, opened by King George Vth in 1923 and therefore named the "Empire Stadium". The FA Cup (the English national football cup) final was held on the same day the stadium opened and 126,945 spectators packed into the ground to watch the game, still the stadium's record crowd. Back then the stadium was a cutting edge structure composed of one single ring of terraces capable of accommodating 100,000 spectators, 45,000 of whom were seated. Part of the main stand was roofed over where the royal box was located. Wembley was (and the new construction still is) one of only a few English stadiums with an athletics track running around it; the 1948 Olympic Games were actually held at the stadium. The old stadium was knocked down in 2003 and has now been replaced by the new Wembley Stadium, which officially opened on the 24th of May with an international friendly between England and Italy Under 21's. Then,



WEMBLEY STADIUM

after being held elsewhere for a number of years, the stadium hosted a hard-fought FA Cup final between Manchester United and Chelsea on 19th May, with Chelsea winning its first FA Cup. The new Wembley Stadium is the most expensive ever built - £ 798,000,000 - and is designed in the form of a bowl capable of accommodating 90,000 spectators, all seated (it has the second highest capacity in Europe after the Camp Nou in Barcelona).

Even though it is designed for hosting football matches, the new stadium - like its predecessor - can also be used for holding international athletics meetings. In these cases, to ensure everybody gets a good view, the athletics track will only be installed when required, covering part of the playing field and seating area (the capacity will be reduced to 60,000), and then removed after the event.

The new stadium, designed by Foster & Partners, has a striking steel arch built on top of the North Stand, which is 133 m high and 315 m long, holding up the stadium roof; the roof is divided into three sections which, in the case of rain, can be closed in approxi-

mately 40 minutes. It took 90,000 m³ of concrete and 23,000 tons of steel to build the new sports facility; at times over 3,500 builders were involved in the construction work.

Mapei products were used on various parts of the overall structure, both for preparing the substrates and installing tiles on floors and walls.

Floors. ULTRAPLAN ECO* self-levelling smoothing compound was used for preparing the floor substrates in the main lobbies, all the restaurants, the toilets for 2,618 spectators and locker rooms for the athletes. This product has a very low content of volatile organic compounds and is ideal for floors subject to heavy foot traffic and other loads.

To improve the compound's adhesion to the concrete surface, a layer of ECO PRIM R* primer in water dispersion (N.B: this product has now been superseded by ECO PRIM T), also with a very low emission of volatile organic compounds, was applied. MAPETEX SYSTEM* was used to create an anti-fracture and removable membrane before laying the tiles in these areas: MAPETEX* non-woven fabric was bonded to the substrate using KERA-

QUICK* adhesive mixed with LATEX PLUS* latex admixture.

KERAQUICK*+LATEX PLUS* was also used to install 60x60 cm and 60x40 cm ceramic tiles on the floors in the lobbies, restaurants, toilets, athletes' locker rooms and 1.4 mx20 mm wide curved porcelain tiles on the stairs .

LATEX PLUS* improves deformability in order to meet the requirements of S2 class (highly deformable adhesive) according to EN 12002 standard. The tile joints were grouted using KERA-COLOR GG* cementitious mortar in anthracite. The expansion joints were sealed using MAPESIL AC* silicone sealant in the same colour.

Walls. KERAQUICK* mixed with LATEX PLUS* was again used in the athletes' locker rooms for installing the 20x20 mm porcelain tiles on the walls; the grouting was carried out using KERA-COLOR FF*, again anthracite-coloured, and the expansion joints were sealed using MAPESIL AC*.

The same products were used for installing the 50x50x5 mm porcelain tiles in the toilets for the spectators. Thanks to Mapei's wide colour range, the tile and expansion joints could be made in the same shades as the tiles.



***Mapei Products:**

the products referred to in this article belong to the "Building Speciality Line," "Products for Ceramic Tiles and Stone Materials" and "Products for the Installation of Resilient, Textile and Wood Floor and Wall Coverings" ranges. The technical data sheets are available from the "Mapei Global Infonet" DVD and at the website: www.mapei.com. Mapei adhesives and grouts conform to EN 12004 and EN 13888 standards.

Eco Prim R: solvent-free neoprene primer in water dispersion with very low emission of volatile organic compounds (VOC). N.B: this product has now been substituted by Eco Prim T.

Keracolor FF (CG2): high performance, cementitious grout, polymer modified, water-repellent with DropEffect®, for joints of up to 6 mm.

Keracolor GG (CG2): high performance cementitious grout, polymer modified, for joints of 4-15 mm.

Keraquick (C2FT): high performance, deformable, rapid-setting cementitious adhesive, with no vertical slip, for ceramic tiles and stone material.

Latex Plus: latex admixture inducing elasticity to be mixed with Keraquick.

Mapesil AC: solvent-free, acetic-cross-linking, mildew-resistant silicone-sealant, available in 26 colours and transparent.

Mapetex System: completely removable installation system for ceramic tiles and stone material. Can also be used as an anti-fracture and removable membrane.

Ultraplan Eco: ultra-fast hardening self-levelling smoothing compound for thicknesses of 1-10 mm, with very low emission of volatile organic compounds.

Photos 1, 2 and 3 by courtesy of Foster & Partners, whom we would like to thank.

TECHNICAL DATA

Wembley Stadium, London (UK)

Work: preparation of substrates, installation and grouting of ceramic and porcelain tiles in the main lobbies, locker rooms, toilets, restaurants and stairs

Years: 2005-2006

Customer: Wembley National Stadium Ltd – concession to The Football Association

Project: Foster & Partners, HOK Sport, London

Contractor: Multiplex, Australia

Installation Company: WB Simpson & Sons Ltd, Surrey (UK)

Mapei Distributor: Domus Tiles, London

Mapei Co-ordinator: Phil Breakspear, Mapei UK