

Barcelona

THE SAGRADA FAMILIA

AFTER MORE THAN A CENTURY OF INTENSE ACTIVITY UNDER THE SUPERVISION OF VARIOUS ARCHITECTS, COMPLETION OF WORK ON THE BUILDING DESIGNED BY ANTONI GAUDÍ IS DRAWING CLOSER





IN THE FACING PAGE.

A view of the Sagrada Família Basilica, whose construction works started in 1866.

LEFT. The Glorious Cross, an 8-ton granite work by Gaudí himself, was placed on top of the façade on the 2nd of July this year.

A few years before passing away in 1926, the architect Antoni Gaudí declared, "I will postpone work on the towers of the Sagrada Família façade until a later date so that other generations can collaborate in the construction work on the church. Various times in the history of cathedrals, the facades have been completed by other designers, but also in different styles". The basilica is under permanent construction, with the cranes alternating above the rooftops of Barcelona, and proof that work on site never stops was given on the 2nd of July this year when the Glorious Cross, an 8-ton granite work by Gaudí himself, was placed in its crowning position on top of the facade, 30 metres above the ground.

A BUILDING UNDER CONSTANT CONSTRUCTION

Over the last decade, work on the internal and external areas has intensified (see *Realtà Mapei International* no. 66) and the construction grows every day without receiving any funds from the state, just donations from the faithful and from ticket sales to the more than 3 million tourists that visit the church every year. Antoni Gaudí's initial design for the Sagrada Família has developed over the years and has now taken on more futuristic forms, the opposite of the more modest and traditional dimensions pro-

posed by Paula del Villar, the architect originally commissioned for the project. In 1866 Josep M. Bocabella i Verdaguer founded the spiritual Association of Devotees of San José, with a commitment to build a church dedicated to the Holy Family, and specific instructions that all the funds required should come from donations made by its followers. It was the architect Francisco de Paula del Villar y Lozano who initially presented the first design, which included three aisles, seven chapels and a spire. In 1883 its construction was entrusted to Gaudí who redesigned a new layout for the basilica, this time based on five aisles, and made the entire structure more vertical and dominant. The intention of Gaudí was to make the Sagrada Família visible from every part of Barcelona, which is why he chose to design a temple with a predominantly vertical aspect that would instantly stand out from the other buildings of the city.

The architecture of the basilica is a mix of Art Deco, Gothic Revival and Catalan Liberty, enriched with columns, naves, ceilings, gates, spires, sculptures and towers that required time, considerable expertise and specialised craftsmen.

According to the original design, the Sagrada Família was to have 18 towers between 90 and 170 m tall, with the last one intended to be the tallest tower

ever built for a church. Various architects worked on the monument following his death and, since then, construction work has never been interrupted, not even during the difficult years of the Spanish Civil War.

Over the course of the last ten years, the new façade and the apostolic towers have been completed and construction work has started on the central tower dedicated to Jesus, which will eventually reach a height of 172.5 metres, and on the tower of the Madonna and the Evangelists.

The difficulties encountered by the team of designers, which includes the architect Jordi Faulí i Oller who has been the Director of Works and has supervised the work of the technicians since 2012, have also regarded the problem of how to reach a compromise between the drawings left by Gaudí and the use of new techniques, new construction materials and the application of new building regulations and standards. The Patrons and proprietors of the basilica, made up of simple citizens and members of the priesthood, are certain that all the work will probably be completed during 2026, the hundredth anniversary of the death of Gaudí, although according to Faulí i Oller, the site will probably remain open to continue with the constant maintenance work.

MAPEI'S INTERVENTION

Mapei Technical Services has been contacted over the last few years to help designing an adequate substrate for the underfloor heating system to be installed in the presbytery and in other areas. It was recommended to use specific products for the substrate preparation (PRIMER G and NOVOPLAN MAXI) and to install the natural stone floorings (KERAQUICK S, ULTRACOLOR PLUS, MAPEFOAM and MAPESIL AC). Mapei also took part in a second intervention to install floorings inside the Sagrada Família, which is currently ongoing. For the installation of stone floorings over substrates with heating systems, PRIMER G, NOVOPLAN MAXI, MAPESTONE 3 PRIMER were again used, with an additional layer of MAPESTONE

2 (a fibre-reinforced mortar distributed on the Spanish market by Mapei Spain), to prepare the substrate. MAPESTONE 3 cementitious bonding slurry, also distributed by Mapei Spain, was used to bond the stone slabs and ULTRACOLOR PLUS and MAPESIL LM to grout joints and seal expansion joints. In the external access area stone floorings were installed with MAPESTONE 3 PRIMER, MAPESTONE TFB60, ULTRACOLOR PLUS, and MAPESIL LM. The installation of ceramic tiles in the Saint Mary Tower was carried out with ELASTORAPID adhesive and KERACOLOR GG and FUGOLASTIC grouts for joints. The waterproofing of substrates and installation of stone slabs on the roofs required the use of MAPELASTIC SMART cementitious mortar, MAPENET 150 fibre mesh, and ADESILEX P4 adhesive.