CERASPAÑA

Special edition
Ceramic and Architecture

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Editorial

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Ceramic is a highly versatile material, used by architects and interior designers in a myriad of different applications from winding seafront promenades to roofs, iridescent façades, latticework for partitioning off areas, and flooring in public spaces subject to high traffic and demanding conditions. This special issue contains details of a total of 15 projects where ceramic products are featured, a material with age-old traditions that has been skilfully adapted and re-interpreted to become the reference point it now is in architecture today. Few materials are able to offer all the benefits and virtues that ceramic products can. A material made of a combination of earth, water and fire, it offers boundless potential, progressing in leaps and bounds thanks to ongoing research and development. Although ceramic tiles might once only have been seen in limited indoor applications in homes, they are now used to create façades for apartment blocks or to pave streets and squares. Indeed, they offer endless advantages almost impossible to find in one other single material. They are resistant, versatile, eco-friendly, fire resistant, hypoallergenic and can be moulded to name just a few of their benefits.

The fifteen projects featured in this special edition of Ceraspaña demonstrate that far from reaching the end of their possibilities, we are now heralding a technological and creative rebirth in ceramic products: technological, because this is one of the industries that incorporates cutting-edge innovations the most quickly, both in end products and in the manufacturing process, and creative, thanks to the amazing results that are being obtained through the industry's collaboration with architects, artists and craftsmen.

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Special edition: Ceramic and Architecture
Address and writing **Ascer - Asociación Española de Fabricantes de Azulejos y Pavimentos Cerámicos**
Rda. Circunvalación, 186 · 12003 Castellón, Spain
Phone. +34 964 727 200
global@ascer.es · tileofspain.com
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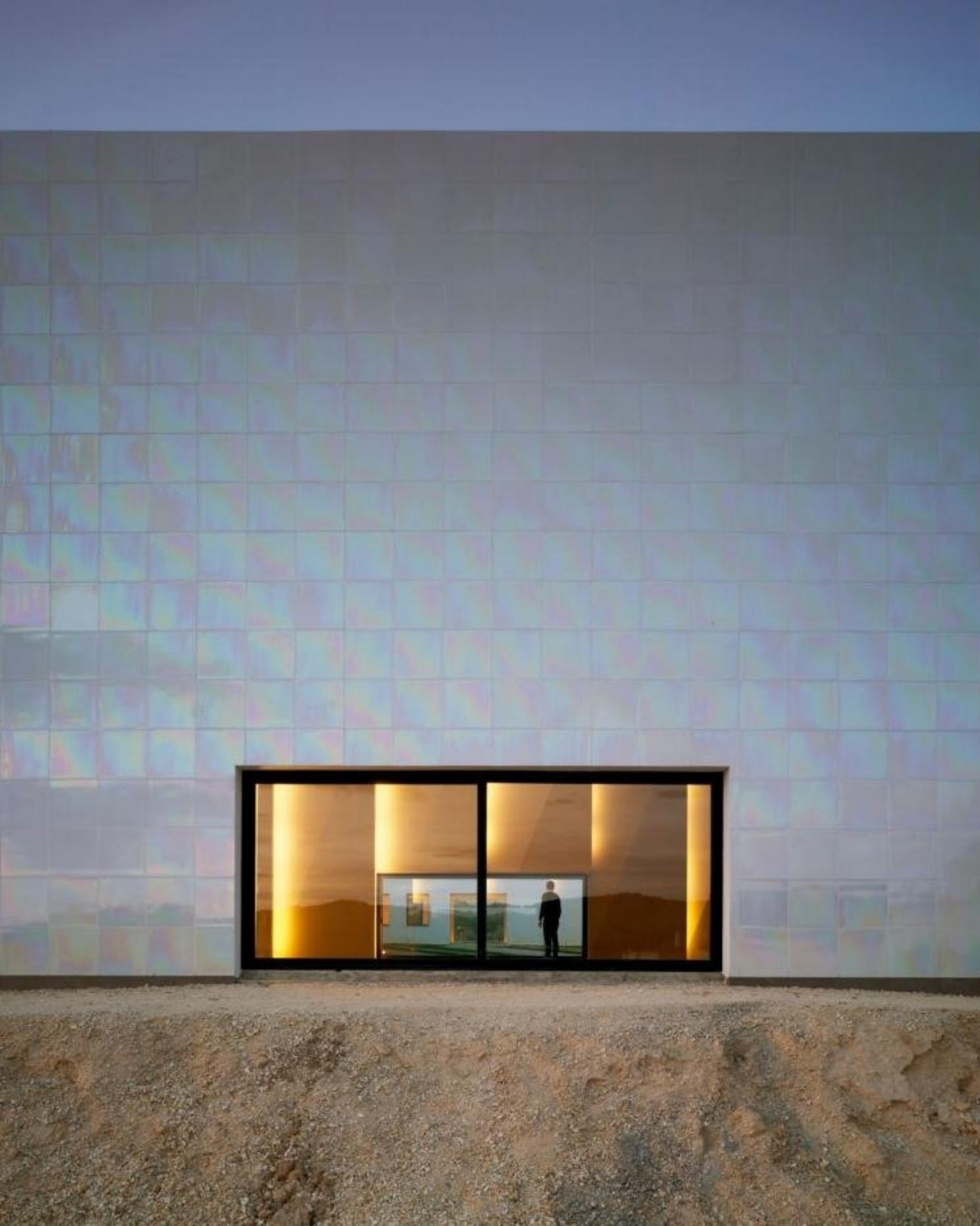
Project index



MUCA. Music Centre

COR (Jesús Olivares, Miguel Ródenas)

Location: Algueña, Spain
Product: glazed stoneware and porcelain stoneware
Tile of Spain Awards
Winner 2011 — Architecture category

Algueña is a small town in the interior of the province of Alicante, with a population of 2.000 and an economy based on agriculture and the marble industry. The project should be capable of bringing together all the activities associated with the world of music and culture that take place in the town. With a reduced budget for the creation of an extensive program linked to music, it was proposed the renovation of a former Civil Guard barracks that had been empty since the 1980s, and the construction of a new auditorium.

The building is a recognizable and working landmark within the town, which doesn't have any connection to any emblematic contemporary structures. The creation of a landmark, in architectural terms, is frequently associated with endless budgets, astounding materials and sculptural shapes. However, this project focused on creating a landmark with a low-cost approach, based on two concepts: "the psychology of perception" with the use of vibrancy and brilliance, and the concept of "shape", with a rounded appearance and proportions in line with its industrial landscape, based on the use of ceramic tiles.

The choice of ceramic tiles with a mother-of-pearl or rainbow effect, was based on the idea of creating a vibrant volume that is constantly changing, either as a result of varying lighting conditions or through the movement of the observer, making the building vibrate, changing its colour and saturation.This ceramic tiles were created especially for this project using firing, glazing and metal depositing techniques to achieve this appearance. The main aim was to not create a perceptive situation instead of a tectonic or formal situation. The technique used was based on choosing a porcelain base material that was resistant to freezing and guaranteed for outdoor use. Each tile is dry pressed and then fired three times: the first bisque firing at 950 ºC, then a second time to fire the white base glaze and vitrify the bisque at 1.180 ºC in a fast cycle, and a final firing to achieve the mother-of-pearl or metallic effect, at approximately 780 ºC.

Photography: David Frutos

Auditorium of Teulada-Moraira

Francisco Mangado

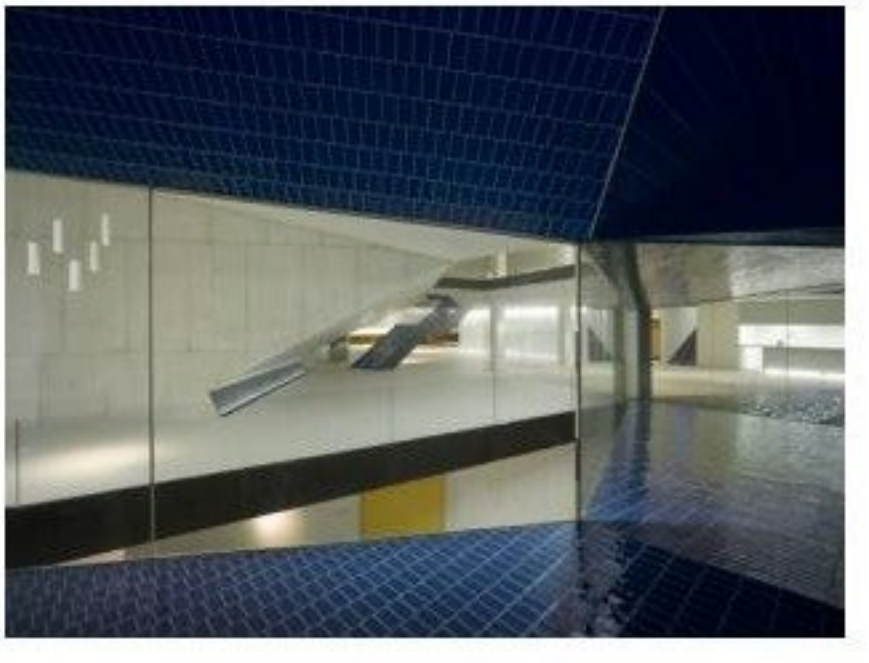
Location: Teulada-Moraira, Spain
Product: Glazed stoneware
Tile of Spain Awards
Honourable Mention 2011 — Architecture category

Teulada-Moraira, in Alicante province, is an urban core (divided into two cores geographically different but administratively one) which is situated on a valley slope descending from the mountain to the sea, renouncing neither its land nor its maritime conditions. Each of the two cores serves as a visual reference for the other. And it is this reciprocal view, possible by the altitude difference, which makes unity win over distance. It would be hard to find a more suggestive context for a project. The plot occupied by the Auditorium of Teulada-Moraira is physically located in Teulada, the higher of the two cores. It is part of a new urban development situated at the city's highest point. From this place, over a valley dotted with small white buildings, it is Moraira next to the sea.

The building's urban and landscaping conditions give the building an importance, They support the fundamental decisions that have been made on its configuration and formal definition. Topographic features and grade differences on the site were also actively determining in the solution adopted. Besides, the program organization is regulated and balanced in accordance to the needs of Teulada-Moraira, as a populated entity with effects on the territorial surroundings, combined with imposed economic limitations, completed the set of general criteria on which the project was drawn up.

The ceramic pieces have a rustic blue finish. They are placed on medium-density fibreboards, with water-repellent treatment (MDF-H), fixed to an existing metal frame by means of pinewood strips prepared for outdoor use.

Photography: Roland Halbe, Juan Rodriguez



MAAT. Museum of Art, Architecture and Technology

AL_A

Location: Lisbon, Portugal
Product: Glazed stoneware
Tile of Spain Awards
Finalist 2017 — Architecture category

MAAT, the new Museum of Art, Architecture and Technology, is an outward-looking museum located on the banks of the Tagus in Belém, the district from where the Portuguese great explorers set off.

Proposing a new relationship with the river and the wider world, the kunsthalle is a powerful yet sensitive and low-slung building that explores the convergence of contemporary art, architecture and technology. The new building is the centrepiece of EDP Foundation's masterplan for an art campus that includes the repurposed Central Tejo power station. Incorporating over 9,000m^2 of new public space and blending structure into landscape, the kunsthalle is designed to allow visitors to walk over, under and through the building that sits beneath a gently expressed arch. During the first year of opening, MAAT welcomed over 500,000 visitors, making it more popular than any public Portuguese museum.

The facade of the MAAT museum continued AL_A's ongoing research into new uses and reinterpretations of ceramics. The textured façade is composed of almost 15,000 three-dimensional crackle-glazed tiles which capture the changing light and give mutable readings of the exceptional southern light that vary with the time of day and the seasons.

The type of clay used was extremely important. There are very harsh weather conditions close to the waterfront, so it was studied the clay and the temperature that it had to go in the kiln. The other critical factor was to ensure the consistency of the crackled effect that the architects desired. In order to achieve this, the glaze had to have a high expansion coefficient so that the sudden change in temperature would induce the crackled effect. From this, there were developed three different types of tile for the facade.

Photography: Hufton+Crow,
Piet Niemann, Francisco Nogueira

Kid University (UPI)

Paredes Pedrosa Arquitectos

Location: Gandía, Spain
Product: glazed stoneware
Tile of Spain Awards
Distinctions of honour 2011 — Architecture category

The Kid University (UPI) is an experimental initiative proposed by the Municipality of Gandía. The UPI is not a conventional kindergarten, but a group of specialized classrooms and workshops located in a natural setting where kids can develop their creativity and have fun beyond a school context. The proposed volume respects the position of six existing white mulberry trees, arranging the classrooms around them and shaping a central lobed courtyard. This courtyard is the core of the Kid University, linking open spaces, covered areas and indoor rooms. Towards the exterior, the building exhibits a sober and continuous facade, serving as a sort of palisade, that avoids building up fences.

White coloured ceramic tiles are the material both for facades and roof. From the outside, the building intends to be a light, white ceramic fence where the shade of the nearby trees is reflected. Vernacular architecture in this Mediterranean area uses ceramic that does not need any maintenance and adapts naturally to its mild climate. In summer it reflects the strong local light and protects inside from high temperatures. In the patio the facades are transparent so all mulberry trees can be seen from the classrooms.

Sustainability is achieved by the own concept of the building. Cost was tight and both structure and construction are finishing's and conditioning. The interior is shaded from the intense summer sun by the mulberry trees that attenuate solar irradiation and cast scattered shadows to the interior of classrooms. In winter mulberry trees have no leaves and sun and light enter freely in the classrooms. So artificial lighting is reduced to the essential. Once spring has transformed the trees and they are full of leaves they become a natural shade for children.

Ceramic piece. The ceramic pieces are serial components 20 x 20 x 5 cm in size, with 4 waves formed on their surface, each with a 4 cm diameter on one side and four flat boards on the other side. The flat side is necessary for the manufacture and firing of the three-dimensional piece, and at design phase, consideration was given to the requirement to not discard this material after firing, but rather use it after the complete enamelling of the piece, in the construction of the roof of the building. In this way, the possibilities of the ceramic piece are fully taken advantage of, using the leftover ceramic and doubling the usage of square meters built.

The pieces are made of extruded stoneware and are finished with a matt white enamel and fired at high temperature (1250 °C) to ensure compliance with the regulations in force with respect to ice, and to attack by acids and alkalis, whilst also having a high resistance to impact.

Photography: Roland Halbe, Luis Asín

Sports hall and classrooms

Alberto Campo Baeza

Location: Madrid, Spain
Product: porcelain stoneware
Tile of Spain Awards
Distinctions of honour 2018 — Architecture category

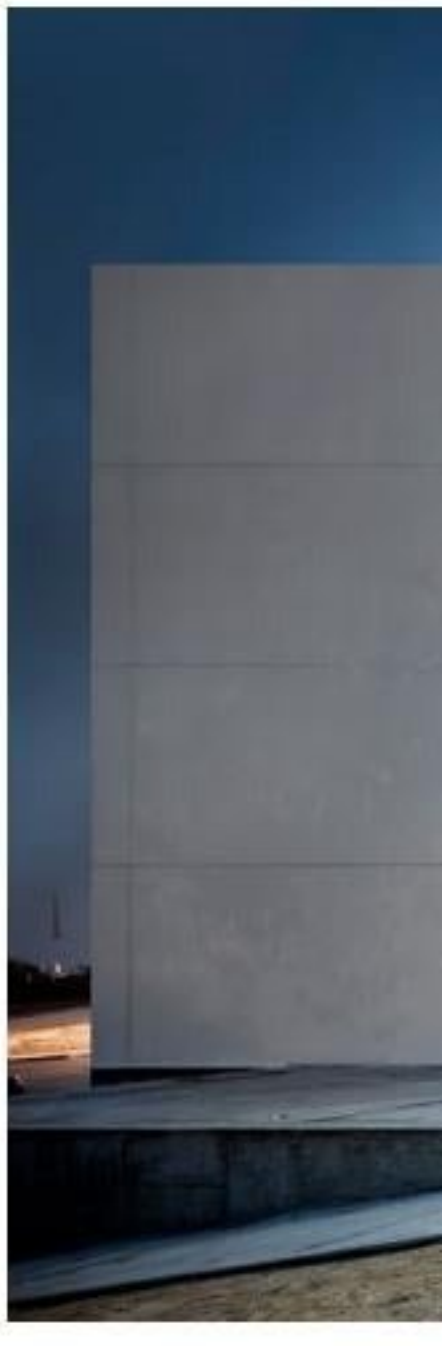
The building, which houses a sports hall and classrooms, was designed for the Francisco de Vitoria University campus in Pozuelo, Madrid. The facilities include sports tracks and courts, multipurpose rooms, a gym, physiotherapy area and classrooms.

This minimalist and streamlined building complies with applicable regulations in force and the overall campus layout in terms of its volume and size. A clear distinction is drawn between the sports and teaching areas of the building through the use of both the volumes and choice of façade cladding materials. The main section of the project is, essentially, a large translucent cube of 60 x 50 x 12 m, creating a carefully controlled screened effect that produces a spatial connection with the campus' central square.

Two clearly-defined streamlined cubes connected by an underlying single volume where the roof serves a dual function as an exterior courtyard linking the two volumes. One of the finest features of this sports hall is the clever use of ceramics for the construction of its main elements.

The interior of the large sports hall is a white porcelain basin. The seating was covered with large format white ceramic tiles. The same material has been used for the skirting boards as well as the top of the seating, creating outstanding brightness thanks to the pure white colour, and guaranteeing optimum resistance to wear and tear thanks to the ceramic characteristics. Choosing ceramic tiles imply additional advantages including easy cleaning and its performance in terms of ball impact resistance.

Ceramic tiles are also the natural choice for the swimming pools, located beneath the sports hall courts, as well as the changing rooms under the seating. White and navy blue porcelain floor tiles with an anti-slip finish were chosen for the pool area. The overall effect is a streamlined building featuring a dramatically restrained design.



Photography: Javier Callejas


RUA
DA
PALMEIRA

House in Príncipe Real

CAMARIM (Vasco Correia, Patrícia Sousa)

Location: Lisbon, Portugal
Product: glazed tiles
Tile of Spain Awards
Winner 2014 — Architecture category

Located a few metres from the Garden of Príncipe Real in Lisbon, this 41 m^2 plot allows the construction of a small 5-storey urban house for a family. The exiguity of the plot has led to a scheme where each floor has a different function and layout and all floors connect through a vertical atrium of variable geometry, providing a naturally-lit cadenced, progressive route. In addition to its spatial qualities, the atrium works as a thermal chimney for passive cooling during spring and summer and allows air renewal throughout the year.

Hard as it would be to plan a typical construction site in such a small plot, a light steel construction system was used, which has an excellent thermal and acoustic performance. It is the first building in Lisbon made with this system.

The building's skin is a contemporary approach to the tiles covering the former building, which was in advanced state of decay. A set of abstract rules is defined to transform the original tile's motif in an abstract pattern, embodied in 3 distinct media: a flat-tile base, a bas-relief-tile body and a perforated-steel, light-permeable, entablature.

Photography: Nelson Garrido

AA House

OAB (Carlos Ferrater, Xavier Martí)

Location: Sant Cugat, Spain
Product: porcelain tile
Tile of Spain Awards
Finalist 2009 — Architecture category

AA House is a singular single-family, located next to a forest bordering a golf course, whose sloping roofs rises from the road.

The house follows a logic of squares aggregation but in this case the geometric order is established on the basis of diagonalization and sloping roofs which give a unique geometric condition to the house, able to define the interior-exterior relationship as a whole.

A 7×7m orthogonal network, on which the diagonals of this network are overlaid, forms, as in a musical staff, the base on which the composition of the project is moulded. The 45º diagonals are the generatrixes for the expansions that arise on the roof – skylights in some cases and double heights in others – producing an artificial topography that rises above that of the terrain.

In this way, the project is developed at the level of the garden, in direct exterior-interior relationship placing living rooms, library, dining rooms, kitchen, main room and guest's suite, all of them visually linked through long perspectives veiled by glasses, lattices and moving panels.

The unique and unsettling fact is that appears to have no staircase and that none of the service facilities are visible, all hidden away which gives the idea that it is not a house but something else. It is more of a pavilion than a house, given that the only thing to emerge is a large open level of rectangular panels in a bright white ceramic, as if it were a temporary Japanese pavilion or a landmark.

The facade, built with white large-size and minimum thickness porcelain tiles, leads to relate the house to punctual episodes in contact with the ground, leaving the rest of the perimeter to other transparent materials.

Photography: Alejo Bagué

Casa Andamio

Bosch-Capdeferro

Location: Girona, Spain
Product: glazed tile and latticework
Tile of Spain Awards
Distinctions of honour 2014 — Architecture category

The Casa Andamio project consists of the refurbishment of a single-family home that was built in various phases starting in the 1950s in the unrivalled setting of the Sa Riera cove in Begur, Girona. In addition to repairing multiple building pathologies, caused by precarious constructive solutions and its exposure to the marine climate, the intervention proposes to strengthen the relationship between the house and its environment. The house turns, thanks to a combination of operations, into a large porch, a covered and ventilated alcove open to the landscape.

The distribution of the interior spaces and all the openings are reconsidered and a light and reconfigurable element, able to qualify the relationship between the existing building and its privileged site is superimposed on the built volume. This new element aims to incorporate the house into the landscape of the site and at the same time to reinforce the presence of the sea and the surrounding nature in the interior, challenging the limits of the façade materiality as a constructive element and proposing as the sole enclosure a filter of an ambiguous nature.

The different densities of the new wall covering, manually sewn in situ using rope as a basic material, allow the regulation of different degrees of relationship between the interior domestic and intimate spaces and the crowded public space of the beach. Cross ventilation, ensured by the opening of a new porch on the southern limit of the property, joined by the shading and the capturing of sea breezes provided by the new filter, represent an efficient passive system that substantially improves the climatic comfort of the dwelling.

Photography: José Hevia


THEKE

Casa Vicens restoration

Martinez-Lapeña Arquitectos + Daw Office

Location: Barcelona, Spain
Product: Earthenware and manual pieces

Casa Vicens restoration has brought to life the existing architectural elements replacing the missing ones, which were able to be reproduced thanks to old photos.

The project Casa Vicens was developed with respect and also with a healthy and independent distance. Missing parts of the distinguished project were replaced with new additions acting with the most accuracy and without fear.

A challenge for its authors consisted of designing a new stairwell to comply with the current building codes and, at the same time, replacing the phantom of Gaudí's original one. This significant vertical element, accompanied by an elevator, occupies the central heart of the building and relates Gaudí's original vacation three level single-family-house to the volume added in 1925 by the architect Serra de Martínez, to accommodate three families in three different floors. Casa Vicens has evolved from hosting private lives to be public, becoming a museum house.

A maintenance and integral restoration plan of the different facades of Casa Vicens was projected. The plan was mainly focused on the glazed ceramic tiles, a representative element of the house. After identifying the damaged pieces with a detailed study, these, were replaced by reproductions made with the same technique that was originally used.

Photography: Pol Viladoms and Casa Vicens

Blue Wave

El Equipo Creativo (Oliver Franz, Natali Canas del Pozo, Lucas Echeveste)

Location: Barcelona, Spain
Product: glazed tiles and latticework
Tile of Spain Awards
Winner 2015 — Interior Design category

The aim of this project was to create a space for enjoying cocktails in an elegant atmosphere with a privileged seafront setting. The building of the Blue Wave cocktail bar is highly unusual: an elongated space with a lengthwise seafront façade filtered by a latticework that creates a clever play of lights and shades as the sun begins to set.

Underlying this idea of a wave, customers are wrapped into a marine setting filled with shadows and reflections. The wave coils up, just before they break, creating separate watery spaces in movement that sparkle and gleam in endless hues.

In order to recreate the idea of the wave, the space is veiled in a range of deep blues that become gradually lighter in tone until they are transformed into the foamy white of the existing concrete latticework. Small splashes of gold were added, mirroring the sun's reflection on the water.

To unify the space and enhance the sensation of being swallowed up by a wave the same material is used on the floor, walls and ceiling. The ceramic tiles chosen fully met these requirements, whilst at the same time reflected the essence of the Mediterranean.

Both types of tiles were especially commissioned and handcrafted for this project: the first was a shell-shaped piece in seven different shades of blue used for the floor, walls and ceilings to portray the transformation of the water into foam; whilst the second formed a contrasting deep blue arch on the walls and ceiling. The tiles feature gloss and matt finishes, thereby creating a clever play of light.

Photography: Adriá Goula

Teacher Training College

Ramón Fernández-Alonso

Location: Granada, Spain
Product: Fired extruded clay
Tile of Spain Awards
Winner 2012 — Interior Design category

The building is conceived in four levels: two below ground, for parking and three above ground containing the program divided into six areas: common areas, located on the ground floor and composed mainly of vestibular areas, cafeteria, library, auditorium, gymnasium, stationery, photocopying; teaching area, located on the first floor and part of the second floor, including classrooms and workshops for students; departmental area, contains the offices and meeting areas and consultation teacher, on the second floor; management and secretarial area, located on the ground floor; parking area, located in the semibasement and basement of the building, has 300 spaces for vehicles; and church, with separate entrance from the outside.

The initial idea is to provide a close architecture, almost familiar both in the composition of spaces as well as in the design of lights and textures that give the ceramic skin. From the very beginning, the materiality of this building is linked to the argument of the project process. Ground floor is projected as a threshold space compressed by the building itself in its upper floors. It could be said that the project is the ceramic skin of the classrooms that hangs over the city map. This basic approach results in the structural solution adopted for this project based on the study of its own section: a roof truss, containing the two upper floors of classrooms and departments, supported by two lines of media saving a long span, under which common areas are developed in continuity with the outside areas of landscaped terraces and protected by a powerful cantilever.

Terracotta pieces are made of clays and ground grog. Extruded and flint fired at high temperature in a slow process. The project develops a terracotta's ventilated façade, this type of facade improves its energetic passive efficiency due to the terracotta's 9cm piece. Four the main parts of the project there were used four piece and their extrusion molds: two of them flat and two curved (one concave and the other convex).

Photography: Jesús Granada


30

Benidorm West Beach Promenade

OAB (Carlos Ferrater, Xavier Martí)

Location: Benidorm, Spain
Product: glazed stoneware
Tile of Spain Awards
Winner 2009 — Architecture category

The Paseo Marítimo (Promenade) in Benidorm is a place that marks the transition between the built city and the natural space of the beach and the sea.

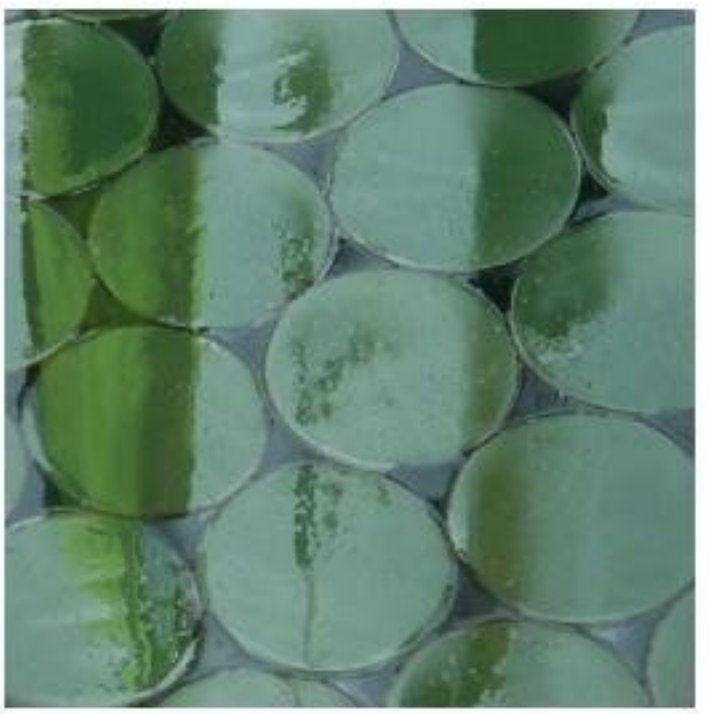
It was designed as a promenade with a rich topography, a dynamic space that provides a walk along and a view over the sea but also includes a few areas where people can sit and contemplate. A set of sinuous lines woven into each other define the various spaces and take on different natural and organic shapes, recalling the fractal structure of a cliff and the movement of the sea and the tide.

The promenade was devised in layers: a first, structural layer creates the edging line, which has been finished in white concrete. Then there is a textured layer with paving in different colours, then a final layer made up of street furniture and natural elements like water and plants.

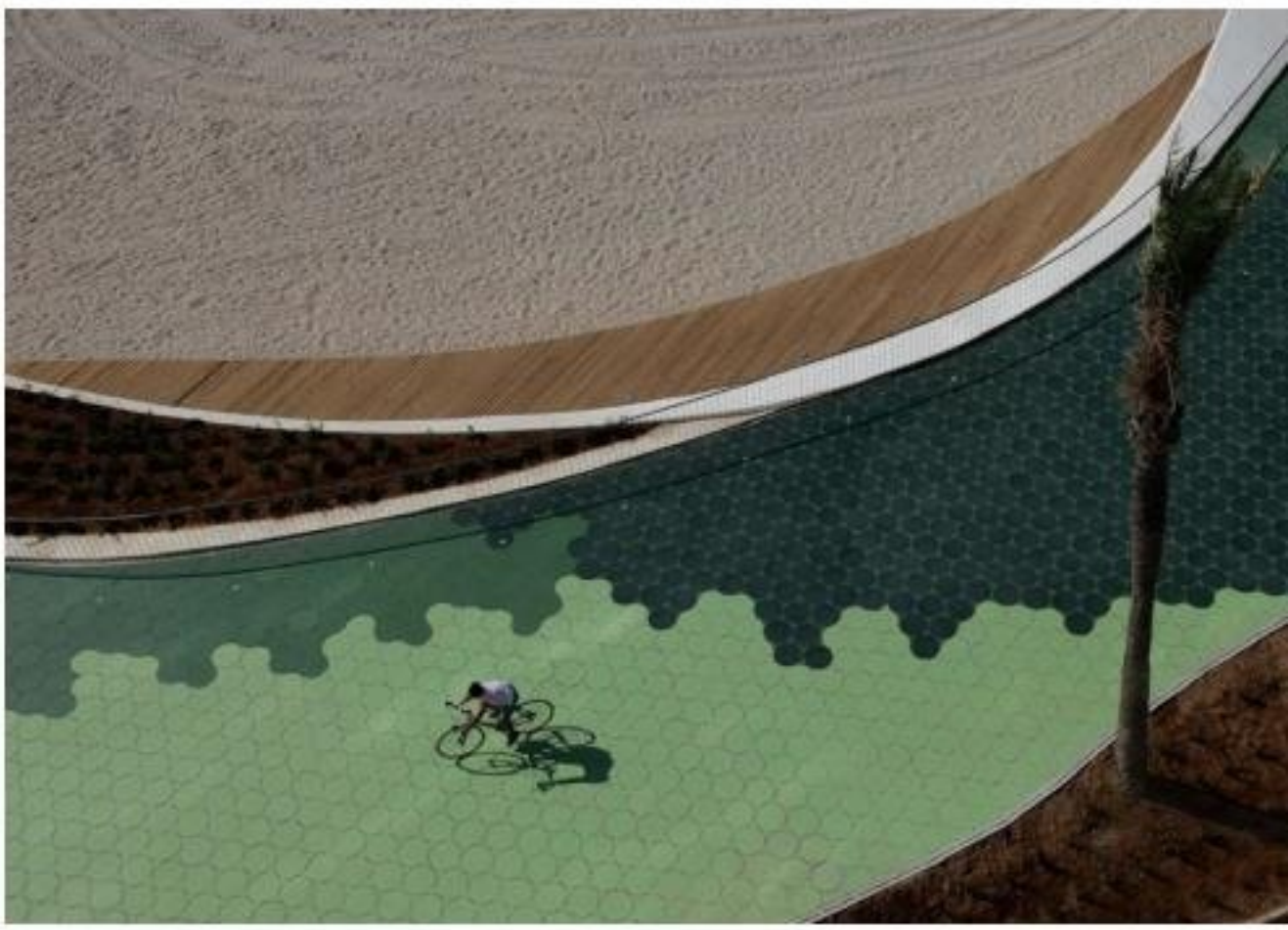
The ceramic paving tiles used on the esplanade along the Playa de Poniente in Benidorm, was conceived in collaboration with the Institute for Ceramic Tile Technology (ITC) and produced on purpose for the project. Their design was informed by two considerations:

Recognition of the Arab ceramic tile heritage, which is widespread throughout the Levante region of Spain. This ceramic is a small piece, here triangular and blunt, which frames the circular piece and defines the whole as a geometrical ceramic carpet that oscillates, adapting to the ribbons that flow through the space, offering the traveler the feeling of buoyancy.

Benidorm is a city of leisure where the culture of holidays and hedonism is part of the tradition of the place. Colours have been used to identify each section of the promenade, which runs for 1.5 Kms along the Playa de Poniente.



Photography: Alejo Bagué, Joan Guillamat



Three metro stations L9

Garcés - de Seta - Bonet Architects

Location: Barcelona, Spain
Product: porcelain stoneware
Tile of Spain Awards
Winner 2017 — Interior Design category

The aim of this project was the interior and exterior refurbishment of three metro stations L9 in Barcelona: Mercabarna, Parc Logístic and Europa Fira.

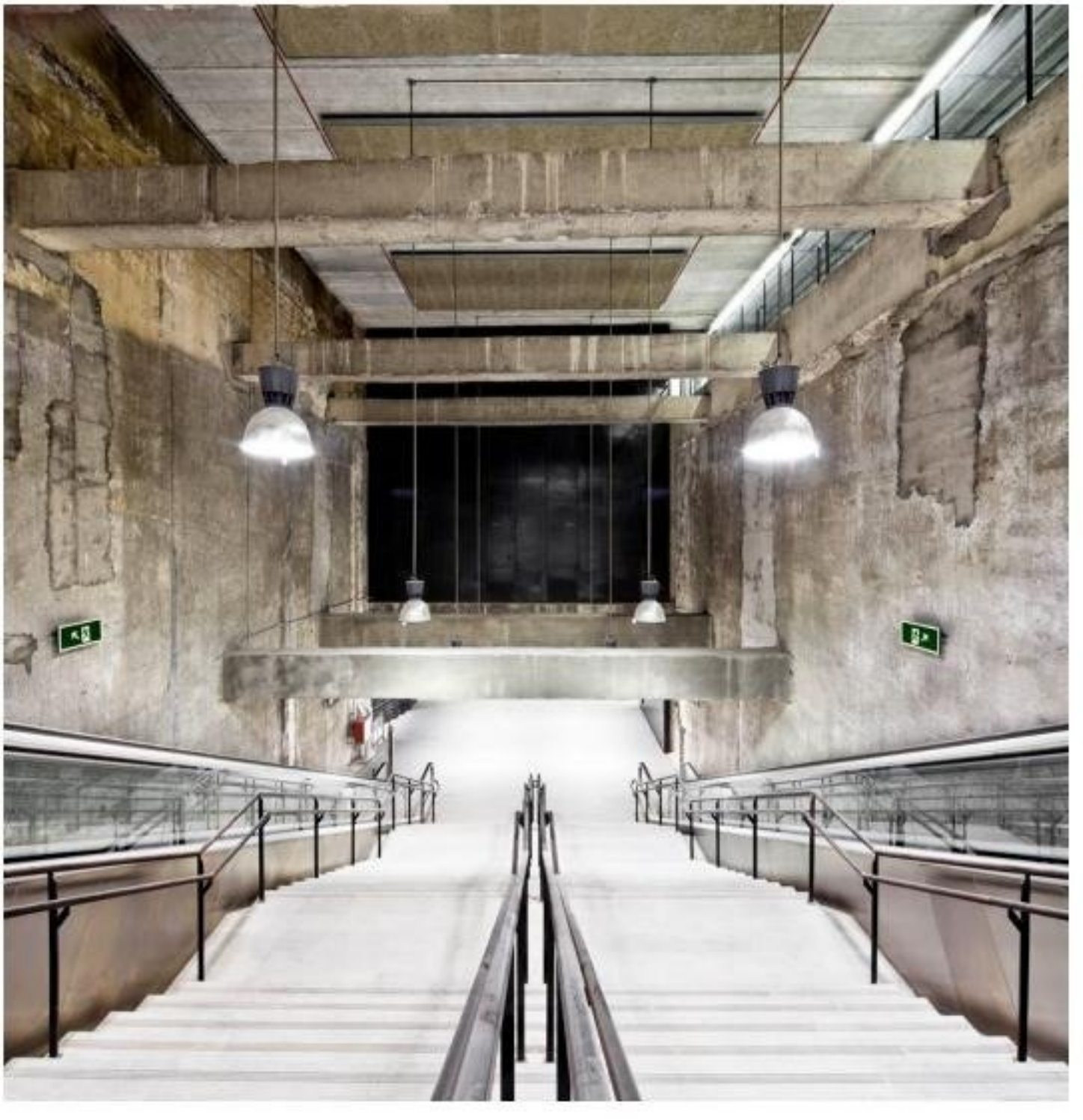
This project is based on the idea that with the minimum resources can get most of the typical conditions of an underground construction, getting a space more geological than a building, following the classic logic that the "place", in the deepest sense of the term, is fundamental in the resolution of any architectural program.

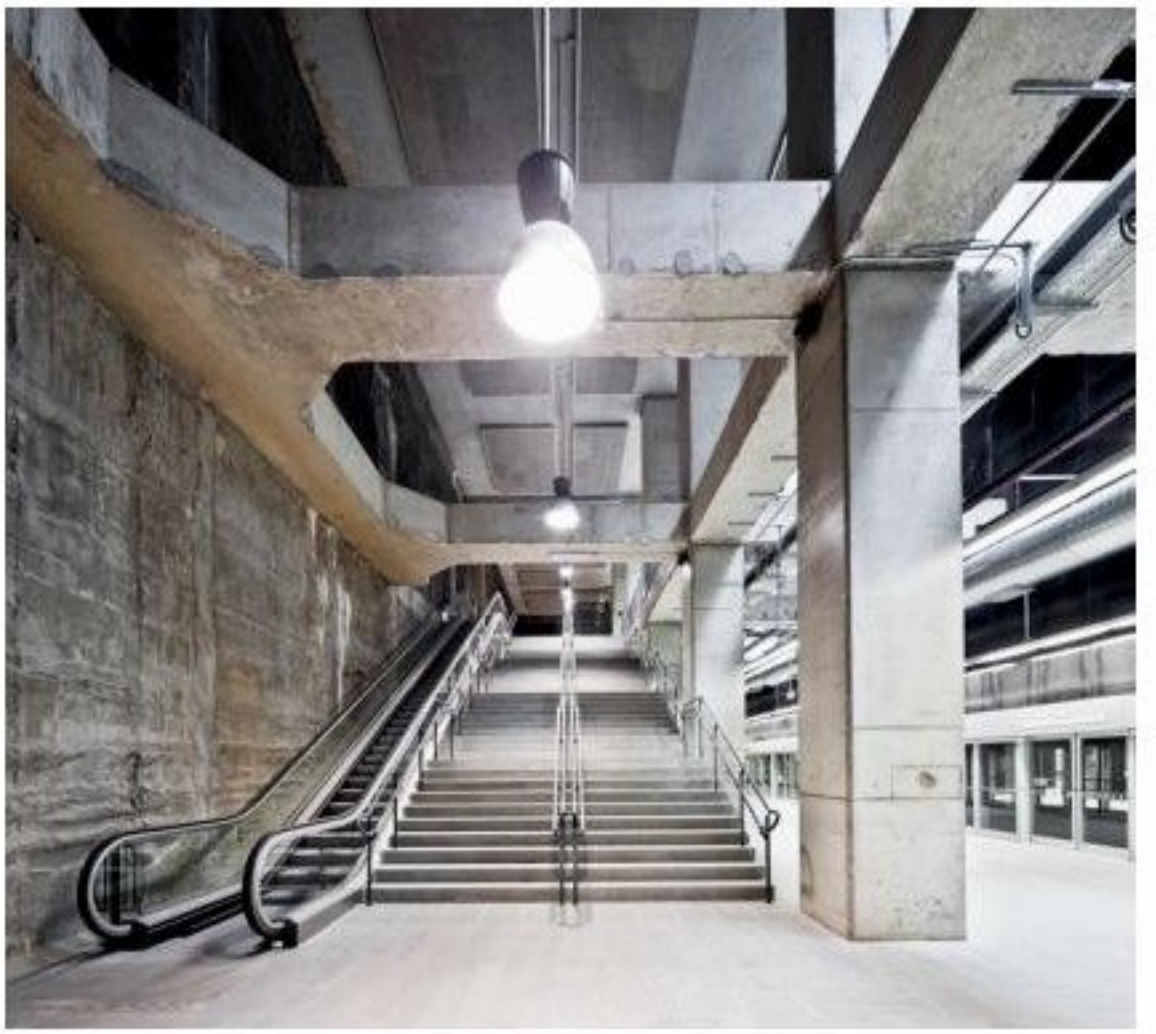
With this idea, it is proposed the use of the lowest number of materials, using even those that are already present in the civil-structural work, such as the slurry walls, the building struts or the prefabricated floor slabs. Another argument of the project revolves around the requirement of closing the platform doors system when the train stops at the station. This fact is integrated as a positive element for the general composition of the proposal: the closure is complete, and the project becomes a game of façades.

The building intends to be timeless (not subject to fashion figures and materials), with a good aging and easy maintenance, keeping a certain look of empty space, even if there are many users. The continuity of the paving starting from the stairs, as well as its stretcher bond laying along the platform, enhances the linear proportion of the train access.

Porcelain stoneware tiles of 19.2 x 120 x 1.3 cm have been used and laid using a stretcher bond. The tactile paving routes are made of the same material but with a relief and are formed with two pieces of 30 cm wide. The manhole covers are tiled with stoneware of the same type of paving.

Photography: Adriá Goula





New entrance to Palma's intermodal station

Joan Miquel Seguí Colomar

Location: Palma de Mallorca, Spain
Product: latticework
Tile of Spain Awards
Winner 2018 — Architecture category

Palma de Mallorca's Intermodal Station was built in 2007 in Plaza de España, site of the existing railway station. The main entrance to the Intermodal Station is by an exposed flight of steps, which suffers occasional flooding due to the fact that it provides access to the underground metro facilities. Further inconveniences include passenger discomfort during hot or rainy weather and continuous escalator breakdowns caused by the inclement conditions.

The intervention resolved two key issues: a cover for the entrance to Palma de Mallorca's intermodal bus and railway station, consisting of a flat roof; and a focal point, a tower information panel, which draws attention to the entrance which was partially hidden between two existing buildings.

The solution consists of a volume featuring ceramic latticework, requiring a minimal impact on the surroundings and which effectively draws attention to the entrance. Further benefits include protection for the station entrance from flooding and minimal maintenance thanks to its simple structure.

The latticework is aligned with a cornice of the existing buildings, establishing a harmonious formal dialogue between the colours and substance of the new ceramic tiles and the older constructions.

After dark, the latticework effect is transformed into an illuminating element, allowing the light to get out through the ceramic tiles thanks to a series of point of light placed around the perimeter.

The ceramic tiles were designed and manufactured specifically for the roof. Measuring 12 x 24 x 12 cm, the ceramic tiles feature a diagonal section that can be positioned in either direction to create varying patterns, whilst also preventing birds from flying into the centre of the structure.

Photography: Adriá Goula, Carlos Gabilondo

Tile of Spain Awards

Architecture

Interior design

tileofspainawards.com