

## **AGBAR TOWER 2004**

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### **AGBAR TOWER**

**1999-2006**

#### **OFFICES**

LOCATION

BARCELONA, SPAIN

STATUS

BUILT

AREA

50.906 sqm

BUDGET

87.000.000 EUR

CLIENT

LAYETANA INMUEBLES, S.A.

COMPANY

**ATELIERS JEAN NOUVEL**

**b720 ARQUITECTOS**

AUTHORS

JEAN NOUVEL, FERMÍN VÁZQUEZ

PROJECT TEAM

**JEAN-PIERRE BOUANHA, VANDER LEMES, CRISTIANO BENZONI, PABLO GARRIDO, ALEXA PLASENCIA, CRISTINA ALGÁS, FRANCISCO MARTÍNEZ, ELISABETH FARRÉS, JULIE FERNÁNDEZ, EMMANUELLE LAPOINTE, PASCALINE PARIS, FLORENCE RABIET**

PROJECT

1999-2002

EXECUTION

2005-2006

STRUCTURAL ENGINEER

R.BRUFU & A.OBIOL

SERVICES ENGINEER

GEPRO

INTERIOR DESIGN

**JEAN NOUVEL (AJN), FERMÍN VÁZQUEZ (B720 ARQUITECTOS), GARCÍA VENTOSA ARQUITECTURA, LEOPOLDO RODÉS, MASTER S.A. INGENIERÍA Y ARQUITECTURA (PROJECTS MANAGEMENT INTERIOR DESIGN)**

INTERIOR DESIGN DEVELOPER

AGBAR – SOCIETAT GENERAL D'AIGÜES DE BARCELONA

CONSULTANTS

MODEL DESIGNER

**ÉTIENNE FOLLENFANT**

COLOR STUDY

**ALAIN BONY**

ACOUSTICS

**HIGINI ARAU**

ORNAMENTAL LIGHTING

**TANN KERSALÉ**

SERVICES

**IBERING**

SET DESIGN

**DUCKS**

GENERAL CONSTRUCTORS

CIVIL CONSTRUCTION SITE **DRAGADOS S.A.**

MECHANIC SERVICES

**AXIMA S.A.**

ELECTRICAL SERVICES

**EMTE, S.A.**

VERTICAL SERVICES

**THYSSEN-BOETTICHER, S.A.**

FAÇADE

**PERMASTEELISA GROUP, S.A.**

INTERIOR DESIGN

**UTE-DRAGADOS – ACSA**

PROJECT MANAGER

ARGOS MANAGEMENT

PHOTOGRAPHY

RAFAEL VARGAS

The Agbar Tower is a 35-storey building, 142 metres high, which stands in Plaça de les Glòries, Barcelona, and was 'made-to-measure' as the Agbar Group's corporate head office. It fits exactly in the acute angle formed by Diagonal Avenue and Badajoz Street.

The shape of the building emulates a fountain having a constant and perfectly stable pressure.

This is a very suitable image for the headquarters of a water company, reinforced by the idea that the building does not lean on the groundfloor of the plot but it emerges from a crater in whose bed there is a water sheet.

Four basement floors fill the whole plot and include support functions and the parking. The auditorium, located in the first basement, appears in the surface as a hill in the undulating topography that makes up the open space planned around the tower.

Structurally, the tower consists of a bearing nucleus and exterior perimeter that transmit the loads of the floors, which lack intermediate support or structural columns. From the constructional viewpoint, it comprises two oval concrete cylinders on which metallic girder frameworks rest to support fretted sheet steel floor-ceiling structures and a layer of concrete. The nucleus accommodates the stairs, the vertical distribution of the utilities, the goods lift and the chief executives' lifts.

The eccentric nature of the nucleus organises the characteristic floor. The free space is compressed in the lift vestibule to gradually expand on the rest of the floor, thereby generating the office work space.

The exterior cylinder is straight up to the 18th floor, where its generatrices begin to curve inwards, the section gradually decreasing as far as the 26th floor, from which point concrete is no longer applied and the building is surmounted by a glass dome with a metallic structure. The top six floors, reserved for the chief executives, are supported by post-tensioned concrete floor-ceiling structures of varying thicknesses, suspended in cantilever from the central nucleus and sharing the great common space beneath the dome. This dome ends the building with its 142 m of height. The exterior surface is 'pixelised' into a network of almost square modules. The window apertures are irregularly arranged on this gridiron to configure a 'calligraphy' conditioned mainly by solar radiation (the density of perforations in the wall is proportional to the sun radiation for every direction).

Following this network, the façade shows modules of aluminium corrugated plate lacquered in 25 colours. This coating protects a rockwool fixed to the exterior face of the wall and provides the shaft of the building with a backing, which gradually changes colour. It begins in the base with reddish shades, earthy like the ground they emerge from and ends in the upper floors with blue shades that blend with the sky in a dematerialisation exercise.

The entire building is encased in a second skin of laminated glass panes separated an average distance of 80 cm from the wall within. The panes vary in terms of transparency, thereby blurring the coloured facade behind, while their degree of inclination depends on their location and a meticulous study of the way the sunlight falls on them.