### **Atlas of Details**



#### BBPR, Arturo Danusso. Torre Velasca 1956-1958

Author(s): Vincenzo Greco, Andrea Pasini Copyright: © 2023 The Formwork URL: https://www.detailsinsection.org/projects/torre-velasca

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Atlas of Details is a research project to demonstrate how insightful a section can be, in order to represent the complexity of the architectural artifact, since it allows the simultaneous perception of materiality and form, of building envelope and interior spaces. Atlas of Details is a project by The Formwork, an association established by professors and PhD candidates with diverse academic backgrounds (history, architectural design, technology, preservation) working at the IUAV University in Venice and at the Milan Politecnico. For more information about the Atlas of Details and The Formwork, please contact info@theformwork.org.

#### The Formwork

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## **BBPR, Arturo Danusso Torre Velasca** 1956-1958

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#### Text

Vincenzo Greco IUAV Venezia

#### Drawings

Vincenzo Greco Andrea Pasini IUAV Venezia

#### Architect

BBPR - Lodovico Beljoioso (1909-2004), Gian Luigi Banfi (1910-1945), Enrico Pressutti (1879-1949), Ernesto Nathan Rogers (1909-1969)

#### Name of the building

Torre Velasca

**Site** Piazza Velasca, Milan (IT)

#### Client

RICE - Ricostruzione Comparti Edilizi SPa

#### Contractors

Sogene

#### Engineer

Arturo Danusso (1880-1968)

#### Other actors

Architects Angelo Mangiarotti, Silvano Tintori, Ugo Rivolta (project collaborators). Curtisa, Fratelli Greppi (metal windows project); Litoceramica Piccinelli (making prefabricated exterior panels); ISMES (structural model).

#### **Building permit**

1955: issuance of building permit

#### Start of construction works

1956 february: start of construction works

#### Intermediate stages

#### End of construction works

1958 february: official end of works;

#### **Construction system**

The construction system impelated for the construction of the Velasca Tower represents a further refinement of the system used for the Breda Tower, designed by Danusso himself. The structural organism is made up between a central reinforced concrete core and pillars, also made of reinforced concrete, positioned on the outer edge of the perimeter in such a way that they do not obstruct the interior space. The inner organism is grafted inside the foundation made through a system called "box," which is reminiscent of the one made for Breda. The floors of the entire building, with the exception of the one at the eighteenth floor and the basement floors, are made of reinforced masonry. The Velasca Tower consists of two volumes: the lower body and the upper body projecting 3 m above the lower one. The structural system of the external pillars was designed in such a way that they, at the fifteenth floor detach from the lower body and then resume their vertical course from the eighteenth floor slab. The floors of these two buildings were carefully studied by Danusso with the support of ISMES. The floor slab of the fifteenth floor was designed to absorb the compressive stresses exerted by peak loads, so it has two reinforced concrete slabs separated by brick elements. The eighteenth-floor floor slab, on the other hand, was designed to resist tensile stresses, so a reinforced concrete slab was constructed within which tie rods were inserted that cling to the elevating columns through struts, unloading all stresses due to tensile stresses onto the perimeter edge beams.



Section AA' - Elevation Scale 1:250

01 5m



Plan 25° floor - Plan 26° floor Scale 1:250



Plan 18° floor Scale 1:250

# $\bigcirc$



Hall section



Hall floor Scale 1:100 5 m 0 1 

1



Detail section and elevation from 14<sup>\*</sup> to 18<sup>\*</sup> floor Scale 1:50

0 1 5m

0





D1 detail of 15\* floor façade Scale 1:15