



Chameleon

MAIN CONCEPT

The facade remodeling of the tower is an interactive and sustainable design of a new "skin" that merges together the construction, the sea and the urban landscape of Piraeus.

The built skin

The body of the tower is covered with vertical glass shades that can be rotated mechanically. Their variation in width and height, the distance between them and the difference in transparency and color forms a flowing rolling glass surface. Thus, the facade changes accordingly to suit different weather conditions.

The colours chosen for the blinds were set to match the artificial and natural surroundings, where the seawater dominates the background. The color-coordinated blinds become denser, while some contrasting color splashes stand out like ships in the sea.

At the other end of the facade the colour tones become gray and beige to match the monochromatic built landscape of Piraeus, with the addition of some green and blue "reflections".

The level of transparency on the glass blinds depends on the orientation of each elevation. The blinds protect the tower from direct solar radiation whilst enabling its natural ventilation and regulating the daylight. That also affects the tincture of colored light that enters the interior spaces.

The space between two adjacent blinds also functions as channel of fresh air inflow in the summer, whilst the panels block the wind in the winter, thus providing both natural but also controlled ventilation and coolness.

Lighting

At night interior lighting that shines through the blinds subtly reflects the coloring of the building. A stripe of LED emphasizes the lines of the white metal frame that hold the blinds together.

Fire safety staircase

The essential extra fire-safety staircase for safety purposes is parted from the main body of the tower and is being built at a distance of 2.3 m. It merges with the base of the building and leads to the shaded ground floor (archade) and the basement. It is painted with silver color that reflects the sun.

Program

The 21st and 22nd floor merge in order to host a spacious restaurant with a tall ceiling that is twice as high.

The 18th and 19th floor merge in order to host a semi-outdoor public space.

The roof of the 2nd floor with the open-air café becomes a garden with various native plants.

One of the lower floors of the tower is used for the electromechanical facilities.

MATERIALS

The materials used are the appropriate for the visual impression the architects wanted to create and most importantly support the sustainable dimension of the building.

> The shades are made of laminated safety glass. Thanks to the high strength performance of DuPont™ SentryGlas® interlayers, the glass can be both thin and light enough to facilitate the use of particularly small point supported fixtures - even for the overhead shade installations of the tower. As a result, the facade transmits a sense of brightness, simultaneously fulfilling rigorous safety requirements.

> The various colours of the blinds are imparted by a colored interlayer, combined with the DuPont™ SentryGlas® structural interlayer for deflection resistance. Some of the glass shades are partly or fully opaque.

> The shades are fitted in lattice metallic beams.

> The aluminum frames fitted with a thermal break and combined with the appropriate glass panes and rubbers, offer high levels of heat and noise insulation.

> Benches designed with Corian® materials by Dupont® and metallic frame are provided in the "green" areas at 18th and 19th open semi-outdoor floors.

> Reinforced concrete and metallic steps make the stairwell.

> Amphibious native plants have been chosen to cover parts of the flat roof.

