Intervention sheet

TEATRO DONIZETTI OF BERGAMO

Magnetti Building realizes an ambitious restoration and prefabrication project

In December 2020, the **restoration and redevelopment works of the Donizetti Theatre in Bergamo** were completed. It represents a masterful intervention of the Magnetti Building, in which technological innovation, production flexibility and attention to detail perfectly reveal the great **versatility** and the highest **quality level** achieved today by the **prefabricated solutions** developed by the Bergamo company.

THE PROJECT

Realized by Arassociati of Milan and Berlucchi Studio of Brescia, the project involved the redevelopment of the **external volumes** and the **stage tower** through the use of materials that fit non-invasively into a pre-existing structure and that were an expression of innovation and technology, preserving its historic façade and parts of architectural value.

The historic façade was built with primordial architectural concrete from the early 1900s, while the elements of the lateral volumes underwent expansion between the 1970s and 1980s by the Architect Pizzigoni, using of second-generation concrete.

THE MAGNETTI BUILDING INTERVENTION

[Magnetti Building](https://www.magnetti.it/) was responsible for the study and engineering of the **cladding panels**, as well as the installation and execution processes of the work, intervening both on existing and newly built structures. Approximately **800 slabs** were then made, mainly large flat elements but of 3- 4 cm of reduced thickness. Then some of these were made three-dimensionally for the reproduction of vertical pilasters on the side elevation view of dressing rooms and multipurpose environments.

The material used is **Effix mortar** produced by Italcementi, which has high mechanical performance and high durability thanks to its mix design. The slabs are internally reinforced by a **fiberglass mesh**, applied on the suspension and anchoring points, which ensures a partially ductile post-cracking behavior and product safety in the event of damage.

Starting from a colorimetric investigation of the Theatre to search for shades that were as close as possible to the colours present throughout the entire existing structure and through the dosing of oxides inside the mortar, the **five shades of pink and yellow** were selected, most suitable to harmonise with the volume and level of finish desired by the artistic management and the Superintendency with a **micro-sandblasting treatment**, protected by a **water-repellent layer**. A deliberately non-smooth finish that gives the Theatre an antique and modern effect at the same time. Visually, today, the side façades and the stage tower of the Donizetti Theatre are a **set of concrete panels in** different shades of pink.

The experience of Magnetti Building in the field of prefabrication has made it possible to identify installation systems already included in the production phase and equipped with a micro-adjustment system for the flatness of the slabs during assembly, made in the Carvico plant.

Thanks to the forced stop due to the pandemic, the production of the slabs has gone through several seasons, exposing the material to different environmental conditions in the most delicate phase of its maturation. To prevent cracking phenomena in the hours following the mortar casting operations, special measures and equipment have been adopted in the Magnetti Building's production department to implement the wet curing of the slabs by **immersion in water**.

In parallel to the engineering and production business, the material and the final product were validated with tests carried out at the Politecnico of Milan. Especially, the **compliance** of the slabs with the requirements required by the installation destination was obtained with the soft body and rigid body impact tests according to international standards.

**Client**: Fondazione Teatro Donizetti  
 **Designer**: Arassociati (Milan) + Berlucchi Studio (Brescia)