

Nicola Berlucchi Civil Engineer, Architect and Restorer

## RESTORATION OF THE TEATRO SOCIALE IN CAMOGLI, GENOVA

Berlucchi società di ingegneria dal 1920

restauro@studioberlucchi.it www.studioberlucchi.it The "Teatro Sociale" of Camogli was completed in 1876 following the design of Eng. Salvatore Bruno Sampierdarena. The theater, inspired by the "Massimo Teatro" in Genova designed by Carlo Barabino, was realized following the tradition of "Teatro all'italiana", with a main hall shaped as an horseshoe with four levels of stalls and an upper gallery.

The town of Camogli lays by the northern part of the western Mediterranean sea, not too far from Genova; The construction of the building coincided with the brightest period of its commercial navy, soon unavoidably failing due to the evolution of the steam sailing. Such decay caused the simultaneous abandon of the theatrical activities. Since then, the Theater was restored in 1933 with the reconstruction of the stalls with a new concrete structure, and was definitively abandoned in 1980. The building was listed by the Ministry of Cultural Heritage, since the quality of its external proportions and the beauty of the interior decorations.

Detail of the façade before the restoration

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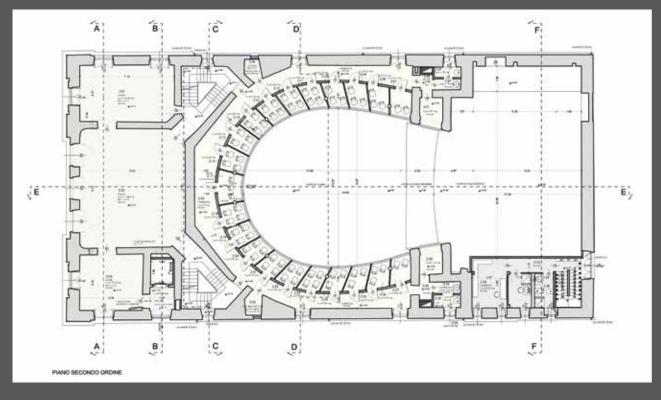




The hall and the main façade of the building during the Sixties

The Theater
in 2005 before
the restoration.
The external
facades are
peeling,
the ceiling
of the hall is
collapsed and
the interiors are
almost ruining





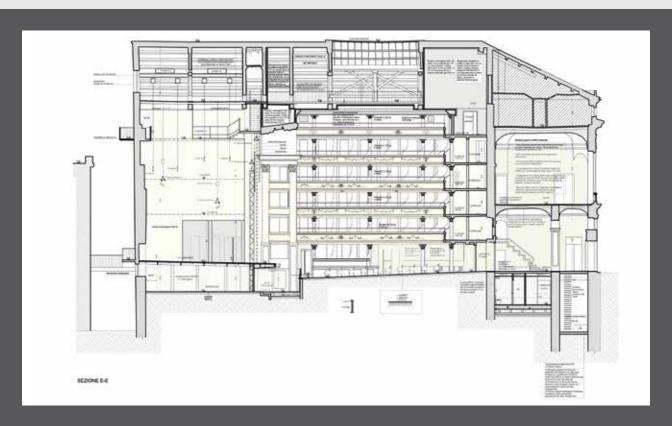
Detailed project. General plan of the second floor



In the early 2000, the "Fondazione Teatro Camogli" (the private company of the owners of the Theater), has decided to restore the building, asking Eng. Nicola Berlucchi and his team to rise to the challenge. The design phase started in 2006 with an overall preliminary project including the complete restoration of the theater. In order to define and verify the preliminary project, the design team, in accordance with the client, has designed and realized a detailed survey campaign, including a geometrical laserscanner survey, chemical and physical analysis on concrete structures, wooden elements, internal and external plasters. The team paid particular attention to the analysis of internal decoration and external facades in order to understand the original aspect and colors of the building. All data collected during the survey campaign were cross-studied with the historical data found in the local archives.

The following detailed design phase lasted approximately from 2009 to 2014; Such a long period of time was necessary to obtain a complete and precise perspective over the setting of the building and over all the aspects of the restoration. During this phase, the project obtained the necessary authorizations by the Ministry of Cultural Heritage and by the fire brigade. Such result was based on the close cooperation of all experts covering every different specializations involved in the work and coordinated by Eng. Nicola Berlucchi.

In 2014, the building yard was finally opened, and Eng. Nicola Berlucchi was the site coordinator in charge for all interventions.



Detailed project. Vertical cross section

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The reinforcement of the columns and of the existing concrete structure



The boxes and their corridor after the restoration

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Examples of the stratigraphic researches lead on the decorated internal surfaces of the theaterand chromatic study of the color palette

The new ceiling realized over the hall







Thanks to the detailed structural model realized in the design phase, the entire structure of the building has been reinforced using a conservative approach; the existing concrete structure was supported with new foundations. Existing concrete walls and columns have been reinforced with carbon fiber and specially designed mortars. The masonries have been strengthened with new steel structures hidden beneath the plasters. A new lift has been fit inside the historical structure in order to allow wheel-chair user to reach all levels of the building. The wooden roof has been reinforced with new steel structures that connected existing elements and added more stiffness. After the completion of the reinforcement, the theater can be considered fully anti-seismic.

Electrical and mechanical systems were completely renewed in accordance with the standards of a contemporary theater: In addition to the new electric system, all public spaces have been equipped with air-conditioning systems that allow the use of the building both in winter and summertime. These interventions were accurately designed in order to minimize the impact on existing structure and preserve the original aspect. The heavy machineries that allow the systems to work have been placed outside the historical building, creating a new external volume well inserted in the surroundings.

The restoration has improved the usability of the scene, in order to allow the representation of complex shows and operas.



Stratigraphic research lead on the external façade; the original colors were white and grey instead of the yellow-brown palette



The original design of a wall light was re-discovered beneath the existing paint, allowing the reconstruction

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After the restoration, all the elements of the building is fireproof and the audience has appropriate emergency escape routes. The building is now equipped by an automated fire detection and fire extinguishing system, connected with a 100 cubic meter water tank (arranged in an underground existing room). The restored theater is now able to accommodate safely almost 500 people.

All original decorations were verified, restored and preserved thanks to an accurate work lead by highly specialized restorers. The choices made in term of colors and finishing of the materials were driven by the respect of the original aspect reconstructed thanks to the preliminary researches, without inserting prevaricating elements. The hall has been finished with wooden floor while the original material of the surrounding corridors was restored. The entire restoration of the building has affected approximately 3 200 square meters.

The entire restoration of the building has affected approximately 3.200 square meters, cost almost 6.000.000 € in total and absorbed approximately 9.000 hours of work for Eng. Nicola Berlucchi and the design team.

The interventions were able to restore the original destination of the Theater in full accordance with the original aesthetic and with all contemporary safety and comfort standards. The restoration has returned a fully reliable theater to the citizenship with great satisfaction of the client and of the public opinion.









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