

# Methods of Restoration for the Ancient Ruins of the Tempio-Duomo of Pozzuoli through a Design Competition

Taisuke KURODA

## Summary

The urban space and buildings in the Italian historical center were developed from the stratification of human daily life from the ancient era. These buildings formed through the stratification of historical elements are significant structures that show a part of the authenticity of the historical town. This paper provides an overview of the urban formation process of *Rione Terra*, the historical center of Pozzuoli located at the center of *Campi Flegrei*, 10 km west of Naples. The study considers the significance of the competition to restore the Duomo (cathedral) in Pozzuoli. Lastly, the treatment of the cathedral's authenticity, the methods of restoration that utilize the historical elements in the ruins, and the technical solutions provided by the first prize winner of the design competition are reported in this study.

The city of Pozzuoli, originally an ancient Greek settlement, developed as an important transshipment base for the transport of Egyptian grains to Rome before the growth of the port of Ostia. The coastal ruins of *Macellum* and the Roman amphitheatre are symbols of a prosperous Roman colony. The first Greek settlement was located on the promontory in Tuff, later called as Rione Terra. During the Roman era the Temple of Augustus (AD1C) in white marble was built on top of the promontory as the acropolis. The seashore sank in the 8th and 9th century because of bradyseism. Thereafter, with the fortification (*Castrum Puteolanum*) Rione Terra became an important strategic base for the defense of Cuma and Capua in the 11th and 12th century. Bradyseism persisted until the 20th century and for security and the total restoration of the buildings, all the inhabitants of Rione Terra were forced to move in 1970. Rione Terra, the historical center with over 2000 years of history, then became a deserted ghost town. The Duomo of Pozzuoli, dedicated to San Procolo in the 6th century, is the reuse of the Temple of Augustus. The Duomo of Siracusa and Church of Santa Maria Sopra Minerva in Assisi, are examples of reuse of pagan temples as Christian churches. These buildings exhibit certain relationships between ancient and medieval urban spaces. The Duomo of Pozzuoli was transformed into a Baroque style church in the

17th century. A fire in 1964 severely damaged the structure.

The restoration of the Duomo began in 1968 and it reinforced the structure and took out the Roman temple from the Baroque church. However, political and economic crisis delayed the restoration project and it was discontinued in 1972.

The international design competition for the restoration of the Tempio-Duomo of Pozzuoli was organized by Regione Campagna in 2003. The design competition required the functional revitalization of the Duomo and the countermeasures against bradyseism with full respect for the authenticity of this important historical building.

The guidelines of the competition provided by Prof. Giovanni Carbonara (Univ. Rome) shows the general direction of theories and practices for the restoration of the monument, which has archeological, architectural, and cultural value. The guideline in the modern theory of scientific restoration has the following themes:

- subordination of all work to improve the conservation of the monument
- standard of “minimum intervention” and respect for the authenticity of the monument
- reversibility, distinguishability, expressiveness, and physical-chemical and figurative compatibility of the new additions
- respect for the stratification also as “minor” evidence

The guideline forms the essential program to understand the characteristics of Italian restoration. Especially the followings are nominated as the criterions of the competition: “Distinguish of the old and new elements”, “Respect for the urban context” and “Respect for pre-existing archeological and Renaissance - Baroque style elements”.

The first jury selected 12 groups for the final presentation. The group of Arch. Marco Dezzi Bardeschi (Univ. Florence) won the first prize. The designs provided by the participants and the winner’s work are very important case studies which consider the archeological and cultural values of the stratified buildings.

Restoration work began in 2005 after the competition; however, the task remains unfinished. The term “Tempio-Duomo” means the extraordinary fusion of an ancient Roman temple and Baroque church. For the recover of the religious function of the building, the suitable capture of the authenticity and the treatment of historical elements were very important in this work.

Behind the facade of the Baroque church a small plaza was created to rebuild the facade of a Roman temple. The pediment of the temple was rebuilt with opaque glass,

which is clearly different from the original white marble of the ruins. The base and shaft of the columns were tiled on the floor to show the original positions. The column elevation was etched on clear glass by sand blasting and lib-glass at half elevation took on the original position of the columns. They show the images of roman columns virtually.

The single nave of the Duomo was developed from the portico and cella of the temple. The floor was reconstructed at the original level. The existing chancel floor was conserved such that the congregation floor (with a bench) declines toward the chancel. The wall of the cella divides the chancel and nave and acts like as a proscenium arch in the theatre. On the edge between the cella and chancel, the wall and columns are tiled on the floor same as facade.

The newly made coffered ceiling completely covers the portico and cella and replicates the spatial composition of a Baroque church. Looking at the nave from the chancel, one can see the unity of Roman temple and Baroque church.

The discovered Roman column from the brick wall stands behind the vault in the chapel of SS. Sacramento. This space demonstrates the process of the formation of this building by exposing historical elements.

The combination of Roman temple and a Baroque church retains the essence of authenticity of Tempio-Duomo of Pozzuoli. The reconstruction of the facade with opaque and clear glass by Bardeschi succeeded in restoring the image of the monument as a Roman temple and also in revitalizing the religious function of the building. The exposition of historical elements and the distinction from around separates the temple and the church, and the functional unity of both architecture must have come from a rich store of knowledge as well as careful interpretation of the context.

There are still lots of problems to finish the restoration but the cultural and economic revaluation of Rione Terra is well expected. The early completion of the restoration of the houses and other monuments and the return of the inhabitants to this valuable historical center are also expected; such would truly regenerate Pozzuoli.

## Gratitude

This survey was performed with the cooperation of Arch. Alessandro Castagnaro (Univ. Naples). Mons. Silvio Padoin, Bishop of Pozzuoli, gave me special permission to

visit the Duomo and the viewing from the roof terrace of the vicarage. Prof. Olimpia Niglio (Univ. eCampus) helped me coordinate the survey, and Prof. Teresa Colletta (Univ. Naples) provided extensive academic suggestions for the study of Pozzuoli and Rione Terra. I express my deep gratitude to these individuals.