

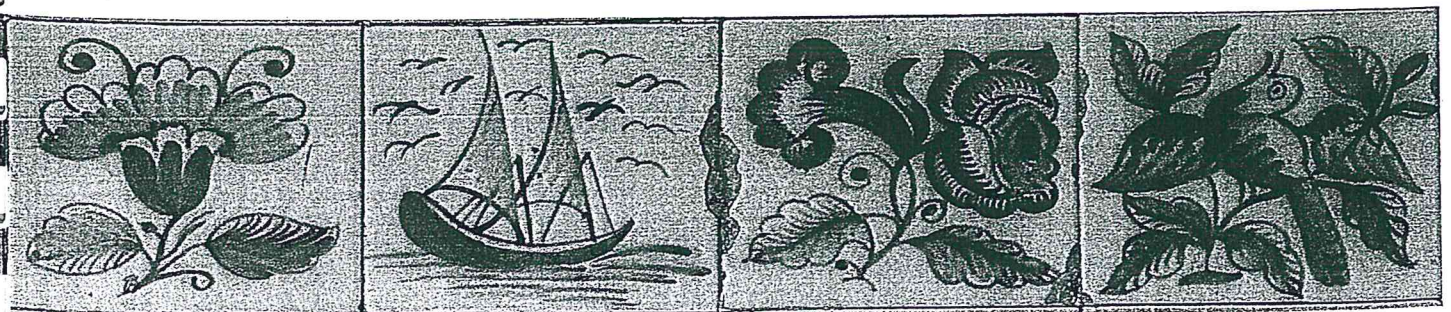


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Program and Abstracts



VILLA MIRABELLO IN MONZA (IT): LOCALIZE HISTORICAL CLUES BY IRT

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Villa Mirabello' building started in 1666 [1], on design of famous architect Gerolamo Quadrio: the project had been a refurbishment and enlargement of a 16^o Century smaller building. Archive documentation pervasively reports about this refurbishment, which consisted of demolition of horizontal structure, re-use of most of masonry as core of new building, reinforcement of ancient masonry by insertion of "ceppo" stone quoins, modeling new exteriors. Aim of the architect was to create an elegant and sumptuous mansion, suitable for noble owners, Giuseppe Durini and his family. Plant and a small part of original finishing ("encausto") are yet recognizable at present status. Nevertheless many questionable interpretation resulted from comparison between documents and building. In fact, cardinal Angelo Durini brought major modification in 18^o century; since 19^o century, further minor changes occurred. Although these latter did not alter the plant, they modified distribution of rooms and masked decoration and finishing. After more than 20 years of neglect, Villa Mirabello is now close to restoration. Architects in charge committed a preliminary set of diagnostics for assessing damage and studying historic evolution. Integration of IR Thermography (IRT) and fiberscopy allowed to detect structure's texture underbeneath plaster, and find out infilled opening. Moreover, archive documents supplied validation of results and, above all, a certain date of building techniques. For that, research constitutes a reference for buildings set in the same area, built in the same ages, but without a so wide archive documentation. Particularly, investigation at Villa Mirabello allowed to map four kinds of recurrent texture: bricks and mortar, pebbles and bricks embedded in alternate string courses, bricks and few stone quoins (irregularly shaped), timber frame wall.

Active IRT gave useful information for structural assessment (localization of arches, chimney stacks, different thickness of wall, wooden elements, voids, beams, etc.) and for evaluating cracks pattern [2].

In addition, dynamic thermal analysis allows to map and evaluate surface damage, as delamination of plasters and patches. These information contributes to focus conservation project, and define costs of intervention.

[1] L. Di Bella, L. Lazzaroni, Villa Mirabello, in *Le Ville Mirabello e Mirabellino nel Parco Reale di Monza*, edited by Silvana ed., 2006, pp. 49-73

[2] E. Rosina, E. Grinzato, *Infrared and Thermal Testing for Conservation of Historic Buildings*, in *Materials Evaluation*, ASNT Journal, volume 59/n 8, ASNT Columbus (OH) USA, 2001, pp. 942-954