LA FORMA DELL'ACQUA – ACQUA COSTITUTIVA E DISTRUTTIVA DELL'ARCHITETTURA IN CALCESTRUZZO ARMATO

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Abstract

The research, taken from the study carried out within the Specialization thesis in Architectural and Landscape Heritage at the La Sapienza University of Rome, has as its object the Flaminio Stadium in Rome.
The sports facility, built between 1957 and 1959 as part of the major works that transformed the city of Rome in view of the 1960's Olympic Games, is a representative case of experimentation in the field of the design, construction and work site processes, especially of great works.
Reinforced concrete is a composite material, featured by the properties of the materials that make it up, as well as by their proportions within the mixture, by the positioning of the reinforcing bars, and by the seasoning of the casting before disarming takes place. Specifically about water, quality assumes a key role in the packaging of the conglomerate, as an incorrect choice could lead to delays in setting and hardening times, inducing aesthetic problems on the surface of the products or, in more serious cases, generating early forms of structure degradation. Generally, the water tests aim at excluding the presence of organic pollutants, that any surfactants can promote unwanted incorporation of air into the concrete, that there are no traces of oil or grease, the absence of acid substances, that could lead to negative repercussions on the structure.
The stadium, designed by the Arch. Antonio Nervi and Eng. Pier Luigi Nervi, is nowadays in a state of neglect, after the last sports activities in the 2012/2013 season. It presents several degradation problems, due to the action of water, both contained in the structures one and the meteoric one.
The challenge that the research aims to face is to investigate the methods of approach to cultural heritage, even if still with difficulty identified as such, in concrete, recognizing the values it carries with it, making it worthy of the restoration practices, which come from the careful analysis of what is at the same time its essence and its cause of degradation: water.

Keywords: *Water, Material, Concrete, Iron, Aggregate, Architecture, Structure*