

CONCRETE SURFACES CONSERVATION: REFLECTIONS ON THE MAIN OPEN CHALLENGES AND PROPOSAL FOR A NEW ILLUSTRATED GLOSSARY OF DETERIORATION PHENOMENA

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ABSTRACT

This contribution aims to review the state of knowledge in the conservation of concrete surfaces and to present a critical and comparative analysis among some of the reference glossaries for deterioration phenomena. During the last decades, conservation of concrete architectures has been increasingly object of attention and a remarkable body of knowledge has been acquired in the field. Despite this, many challenges remain still open, due to the conflicts between current repair options and conservation requirements: diagnosis and repair, indeed, can be particularly invasive on concrete surfaces, that are often a key element of architectural expressivity. A crucial shift therefore is needed, that is conceiving diagnosis and repair for concrete heritage not only in terms of efficacy and durability, but also in terms of visual/aesthetic compatibility.

The lack of an international shared glossary for historic concrete deterioration phenomena is one of the main open issues. For this reason, this contribution presents a comparative analysis among some of the reference glossaries (not only for concrete) – defined by Istituto Centrale per il Restauro, Laboratoire de Recherche des Monuments Historiques, American Concrete Institute, Concrete Society and ICOMOS. The identification of discrepancies, whether in the titles or in the definitions of degradation phenomena, highlights the need for further clarifications and study, and set the basis for the development of a new shared glossary for historic concrete.

Key-words: Concrete surfaces conservation, Concrete architecture, Concrete diagnosis, Glossary, Deterioration phenomena.