BLACK CRUST

Mostra

Montjuïc sandstone (silicic sandstone)

Capitals of the Northern wing of Sant Pau del Camp Cloister. Barcelona. Spain. XIII century.

Causes de la patologia

Particle and environmental pollutants deposition on thin layers of plaster-lime applied on the building during the XIX century. The crust has reacted chemically with the whitewash.

Imatge de visu


Autor: Cetec-patrimoni

Descripció: General image of the hard black crust in contrast to washed areas in the intrados of the arch. The layer is formed by crust and whitewash and is partially separated from the stone substrate by subflorescences.
The capitals and the columns received different undocumented restorations during the XX century in which most of the whitewash was removed.

Imatge detalli / macro


Autor: Cetec-patrimoni
Augments: x40

Descripció: On the obverse of the sample can be seen different brown and black shades, whose tone depends on the degree of deposition of pollutants. On the reverse, can be distinguished the thin layers of whitewash of the XIX century and salt efflorescence.

Imatge Microscòpia

Autor: Cetec-patrimoni
Augments:
Descripció: From left to right: the texture of the Montjuïc sandstone, two layers of whitewash and black crust.

Patologies associades

Salt efflorescence.

Flaking.

Bibliografia

ICOMOS-ICS (2008). Illustrated glossary on stone deterioration pattern.

http://international.icomos.org/publications/monuments_and_sites/15/pdf/Monuments_and_Sites_15_ISCS_Glossary_Stone.pdf

ORDAZ, J., & ESBERT, R. (1988). Glosario de términos relacionados con el deterioro de las piedras de construcción. *Materiales de Construcción, 38* (209): 39-45. doi: 10.3989/mc.1988.v38.i209.847

Autor

Manuel Iglesias Campos. manuel.iglesias@cetec-patrimoni.com

Restorer

Institució o Empresa

Universitat de Barcelona