BLACK CRUST

Sample

Montjuïc sandstone (silicic sandstone)

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

Pathology Causes

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.

Visual Image


Author: Cetec-patrimoni

Description: 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.

Image detail / macro


Author: Cetec-patrimoni

Magnification: x40

Description: 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.

Microscope Image

Author: Cetec-patrimoni
Magnification:
Description: From left to right: the texture of the Montjuïc sandstone, two layers of whitewash and black crust.

Associated Pathologies

Salt efflorescence.

Flaking.

Bibliography

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Restorer

Institution or Company

Universitat de Barcelona