

CALCITE ENCRUSTATION

Sample

Limestone (bioclastic calcarenite)

Horse from the sculptural group "Birth of Venus". Fountain of Ciutadella Park. Barcelona. Spain. Sculptors: Hermanos Vallmitjana.

Project of Josep Fontseré (1875-1888).

Pathology Causes

Carbonate deposition and precipitation from the fountain water and the rock dissolution.

Visual Image



Author: Cetec-patrimoni

Description: Dark brown encrustation in contrast with the ochre stone colour. High adherence to substrate; compact and hard. It has a rough and opaque texture on dry surfaces and a smooth texture and translucent crystalline aspect on wet surfaces.

(Images during the encrustation removal process).

Image detail / macro



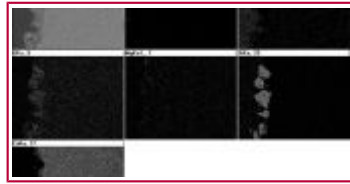
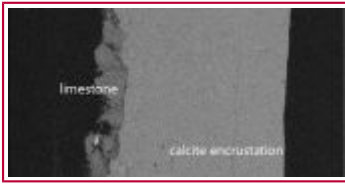
Author: Cetec-patrimoni

Magnification: x40

Description: Figure 1. Sample taken from the horse's tail (wet area): deposition of different brown layers with smooth texture (concretion) on an ochre layer (stone) and a green one (algae).

Figure 2. Sample taken from the horse's chest: different strata of brown deposition with nodular texture (concretion) on an ochre layer (stone).

Microscope Image



Author: Cetec-patrimoni

Magnification:

Description: The structure of the sample can be clearly seen.

The stone is very porous, with siliceous aggregates surrounded by a calcite and dolomite microcrystals (with presence of algae structures). Above, there is a thick layer of deposition of microcrystalline texture with highly developed calcite aggregates.

Associated Pathologies

Endolithic algae.

Bibliography

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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

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Restorer

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