

SALT CRUST

Mostra

Nostra Senyora del Remei Chapel. Monastery of Aviganya. LLeida. Spain.

Causes de la patologia

Rising damp of water contaminated by debris and fertilizers that imparts potassium nitrate and other alkalis to the stone. Another less important source of salts comes from the existing tombs under the pavement.

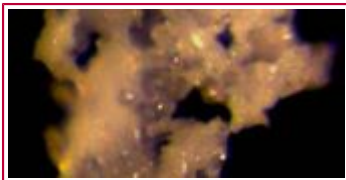
Imatge de visu



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Descripció: Rising damp from the floor (the church is built on a geological structure that favours water and moisture retention).

Imatge detall / macro

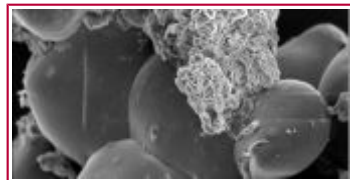
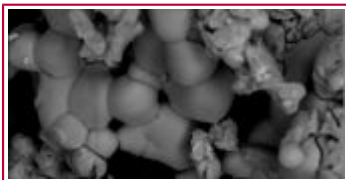


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Augments: x20

Descripció: Sub-rounded and amoeboid crystal habits. These habits indicate that salts are very hygroscopic and have grown into a very wet wall.

Imatge Microscòpia



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Augments: Figure 1. x750. Figure 2. x1000 - SEM-BSEI

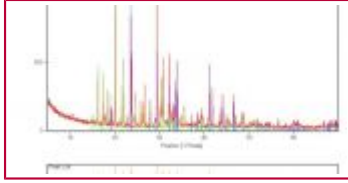
Descripció:

Sub-rounded and amoeboid crystal habits indicate that the salts have grown in a very wet wall in direct contact with moisture. Their tendency to cluster in nodules indicates long repeated cycles of crystallization, mainly linked to seasonal changes and different periods of rain.

Patologies associades

Flaking.
Sanding.
Blistering.
Alveolization.

Altres anàlisis



DRX

Observacions

Potassium nitrates and other alkali salts (niter) and magnesium sulphates (hexaedrite).

Bibliografia

ARNOLD, A. & KUENG, A., (1985), Crystallization and Habits of Salt Efflorescences on Walls. Part I, Methods of Investigation and Habits. Vth International Congress on Deterioration and Conservation of Stone. Lausanne. pp. 255-268.

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CHAROLA, A. E. Salts in deterioration of porous material: an overview. JAIC, 39.2000. pp. 327-343.

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