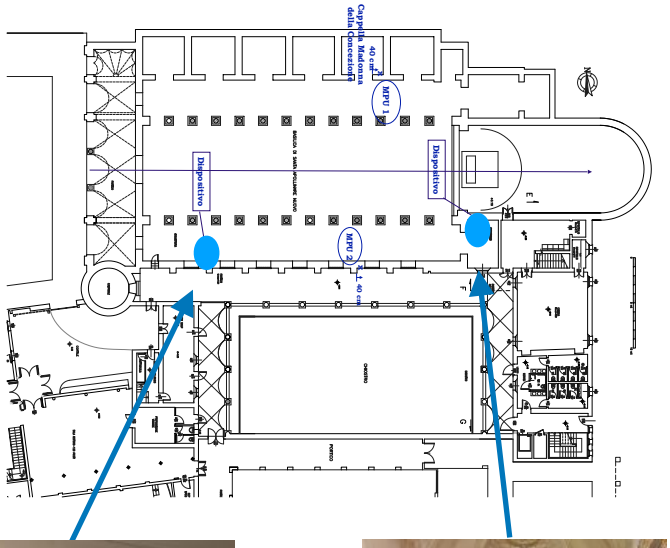
dry up

NON-INVASIVE AND COMPLETELY NATURAL TECHNOLOGY AGAINST RISING DAMP

Sant'Apollinare Nuovo Basilica - Ravenna, Italy

Customer **Ravenna's Diocese**



Type of property:
Ecclesiastical building - Basilica included in the list of Italian heritage sites by UNESCO in 1996.

Localization:
Ravenna - Emilia Romagna (Italy)

Historical data of the property:
The basilica was erected by the gothic king Theodoric in 505.
The Portico was built from the end of the XVI century to the end of the XVII. The bell tower was built, probably, between the IX and X century.
The last extraordinary maintenance operations were carried out between 1998 and 2001.

Extension of Dry Up intervention:
Two Dry Up devices to cover an area of about 2750 m2.

Period of expected draining:
5 years.

Diagnostic controls:
Installation February 2019
6 follow up checks
Next check in July 2020

Criteria for success:
At the last check, dated in November 2019, that it to say after only nine months from the installation, the average decrease of moisture, measured with the ponderal system, is 24,9 %.

Problems

La Basilica had an important pathology of the walls due to the invasion of water caused by rising damp.

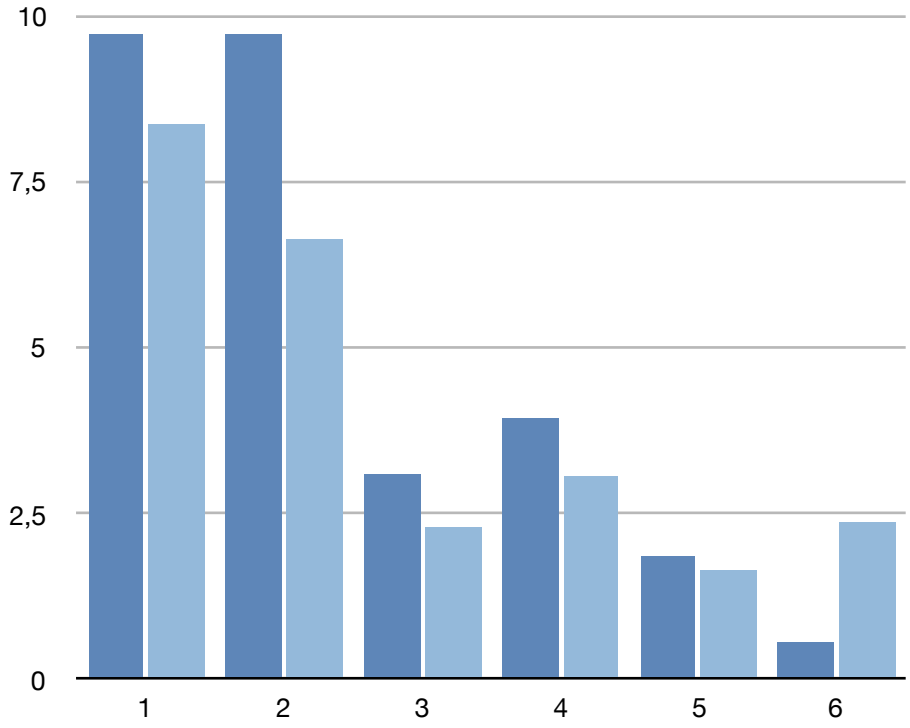
The masonry structures are made of brick and lime mortar. Towards the end of 1900, dehumidifying plasters were made on the walls already previously plastered, which, in part, are losing their function after about 20 years.

Draining

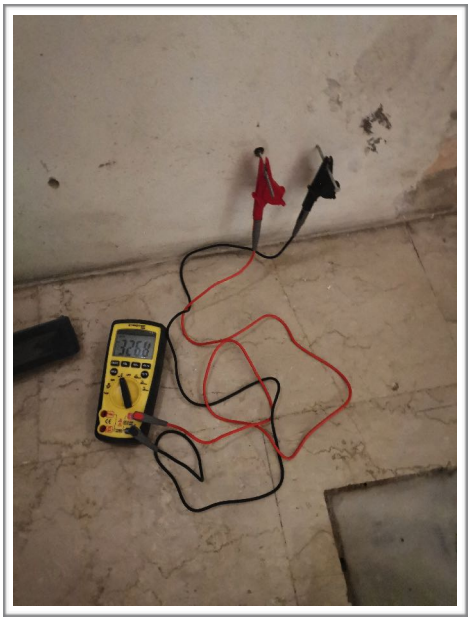
The building will continue to be monitored in order to obtain a complete draining in the estimated period of 5 years from the date of installation of Dry Up devices.

After appropriate analysis of the characterization and existing dehumidifying plasters, they may be partially or totally replaced.

MOISTURE PONDERAL MEASUREMENT - MPU1 VALUES



Sant'Apollinare Nuovo represents for Atena and Dry Up's technology a "school yard".
Inside the basilica are installed the first prototypes of technology that allows a constant telemetry, at a distance and in real time, of various parameters including:
dampness and temperature, damp ness and temperature at 10 cm depth in the walls, electrical conductivity (measurement of impedance) at 5-10 cm depth.
Digital telemetry technology will be marketed in 2020.



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