

## Vatican Necropolis

Below the Vatican Basilica, were discovered in the early last century, the tomb of St. Peter and a number of burial buildings dating from the second and early fourth century AD. Taken away the land and landfills, which were served to the architects of Constantine to provide solid foundations of the first basilica, archaeologists unearthed a double row of burial buildings, neatly arranged on the edge of a narrow road going up the hill and the Vatican leading to the tomb of Peter.

The twenty-two tombs, discovered on an area of about 70x18 m, had elegant brick elevations, and were once illuminated by sunlight. Their interior was decorated with valuable paintings, stucco and sometimes mosaics. These buildings, for interment and cremation of the dead belonged to wealthy families of ancient Rome.

### Purpose of monitoring:

The discovery of the tombs has led to a sudden change in microclimatic conditions, in which the surfaces and the various works on display were all too familiar. This change has led to a widespread degradation of the various mausoleums. During the restoration project has been found necessary to undertake a survey and preliminary physical parameters of microclimate issues.

### Installed system:

The system consists of a central data collection WireClimArt with 48 channels. This system provides for the detection of environmental data along the entire path of the Necropolis, and the detection of the external climatic conditions by measuring the parameters of temperature and relative humidity. The center is equipped with mechanisms of remote control via telephone cable for remote management system. The monitoring continues to this day, even after the conclusion of the restoration in most mausoleums. It has recently raised the issue of air quality, because given the large influx of visitors were detected elevated levels of CO<sub>2</sub>. They are part of the system including humidifiers to maintain the balance thermohygrometric in the frescoed rooms.

