

## L'HERMITAGE

MONACO

### Real time vibration monitoring of the Hotel during an excavation with explosives

The Hermitage Hotel is a building built with beautiful architecture which is among the luxury hotels of the principality of Monaco. The building is built on a cliff and overhangs the harbour of Monaco, offering a magnificent view overlooking both the harbour and sea.

An important extension project, including a 35 m deep excavation to the right of the building, was launched in 2002.

The works awarded to Solétanche SAM include the cutting into the cliff and the excavation of the rock using explosives to allow the construction of 5 car park levels and 4 floors of supplementary rooms below the existing building.

The contract to carry out the vibration monitoring to the hotel, that remained open during the drilling and blasting works was awarded to SolData.

This real-time vibration monitoring is possible thanks to a Gorgone seismograph connected via both cable and radio links to 16 tri-axial sensors of low frequency (4Hz.) The Gorgone seismograph records any breach of the preset thresholds in real time. It allows signal recording during the blasting as well as the processing of the information collected. The transmission of the readings is automatically made by radio. All recorded data is immediately available in the site offices.



*Facade of the Hermitage Hotel. 16 tri-axial sensors were installed on the key structural elements of the building*

OWNER:	HERMITAGE HOTEL
MAIN CONTRACTOR :	SOLETANCHE SAM
PROJECT DURATION:	SEPTEMBER 2003 – NOVEMBER 2004
<b>SCOPE OF WORKS:</b>	
<ul style="list-style-type: none"><li>• Installation of a GORGONE linked to 16, 4Hz triaxial sensors</li><li>• Real time transmission of the data by radio</li><li>• Automatic reports including vibration tresholds and spectrum analysis.</li></ul>	