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## AUSCULTATION AND MONITORING IN REAL TIME

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**Abstract:** The auscultation project was created for execution of the work necessary for the high speed train (AVE) to enter in the railway station Sants in the city of Barcelona, Spain.

This location, a priori, made the execution of work extremely difficult. That is why the auscultation and monitoring project needed to be performed.

The points which raised particularly serious difficulties as described in what follows:

- 1) the location of the station
- 2) the location of the prisms
- 3) obstructed field of vision
- 4) frequency of the trains (600 per day)
- 5) the weather
- 6) the temperature gradient
- 7) communications,

etc. etc..

Key words: monitoring, real time, total station, tunnel

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