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Abstract

The rock face diagnosis is a follow-up and check operation of the earth works along the national rail network, requiring a structural analysis. At present, this fastidious expert work is generally completed in a simplified and often punctual way on the site. To increase its technical performance, the SNCF suggests setting up a methodology of acquisition and processing of 3D data, leading to an optimization of these structural studies.



Main idea

families. Extracting the orientations of the discontinuities, from 3D models, can lead to stability prediction

3D Point cloud processing : semi automatic process



Terrestrial laser-scanner and photogrammetry, used in railway field, is introduced for 3D mapping and documentation of rock faces. Laser-scanning and digital imaging data art of the rock face. By reducing the time of the on-site survey, these technologies are very appreciated in the railway environment. These results lead to an improvement of the quality of the diagnoses, and allow us to consider an optimization of the reinforcement works.

SAMPLING AND MODELING OF ROCK DISCONTINUITIES BY TERRESTRIAL LASER SCANNING AND PHOTOGRAMMETRY ...

... in railway environment

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