

Geological engineering in geotechnical works



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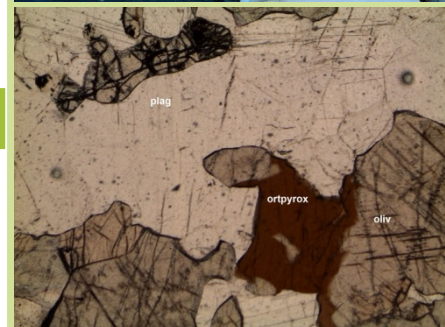
Objectives

- A set of investigations are being put forward aiming to improve:
- geotechnical characterisation of portuguese ground, both onshore and offshore, to support both design and rehabilitation works;
 - geotechnical modelling and the use of geoscientific data;
 - implementation of geotechnical risk management in tunnelling since the design through out construction phases;
 - development of easy to use methods for assessing excavability and stability of rock cuts;
 - quality assurance/control in construction works and the application of contingency plans.



Methodology

- Several investigation on geological and geotechnical features are underway, namely:
- of a stretch of sea-floor (fig. 1) in North Atlantic continental shelf, Portugal, in an pilot research study in Portugal;
 - of gabroic rocks (fig. 2), a kind of rocks so little characterized all over the world;
 - to define checklist of potential hazards and associate risks for underground works in igneous and meta-sedimentary rocks (fig. 3);
 - to analyze rock mass excavability and stability restraints for highways cuts (fig. 4).



Expected Results

Fundamentally, to ensure the adequability of design and increase productivity, security and economy of construction works, namely by producing PhD and MSc thesis in Geological Engineering.

