

## **ANALYSIS OF THE KARSTIC SYSTEM IN THE TIJUCO ALTO DAM RESERVOIR AREA, SÃO PAULO AND PARANÁ STATES BOUNDARY**

DEHIRA, L.K., AZEVEDO, A.A., MAGALHÃES, F.S., NAKANDAKARE, C.-IPT - Inst. Pesq. Tecnol. ESP

The Tijuco Alto Dam is planned to be constructed in the Ribeira do Iguape River, Paraná and São Paulo states boundary, over calcareous and metasedimentaries terrains of the Açungui Group and Catas Altas granitic massif. It is a double-arc-like dam, upstream of the Adrianópolis city, whose axis will be located at 167 m above the sea level, with a remarkable fall regarding the surrounding plateau, over 1,000 m above the sea level. The reservoir will have the nominal operation level around 290 m above the sea level, covering around 43.2 sq km. The axis of the dam and the most part of the reservoir will be located over calcareous rocks that show strong karstification due their structural characters, position on the relief and the climate of the region. In the reservoir area was observed tens of natural caves and hundreds of dolines, besides others minor karstic features. The present study aimed to analyse the development and the modification of the karstic processes velocity, regarding the elevation of the water table due the filling of the reservoir, to assure the security of the dam and the reservoir water retention. Mathematical simulations of the underground water flux was utilised, using available data of boreholes and field data.