

NZGS BRANCH PRESENTATION – EVENING LECTURE

THE FAILURE OF AZNALCÓLLAR DAM



Aznalcóllar dam, a tailings dam in Southern Spain, failed catastrophically by sliding on the foundation clay. Parts of the dam moved downstream more than 50 m. The resulting spillage caused one of the worst environmental disasters in Europe threatening a major nature reserve located downstream of the dam. The lecturer was an expert witness for the court in the judicial case that was initiated immediately after the failure. The lecture describes the investigation carried out including field observations before failure, a description of the geometry and mechanism of failure as well a number of analyses of the failure and of the post-failure dynamics. Special attention is given to the causes underlying the failure that involve progressive failure and the presence of very high pore water pressures in the foundation. The lecture concludes with a summary of the lessons learnt and their implications for future designs.

ABOUT THE SPEAKER:

Professor Gens was an expert witness for the court in the judicial case that was initiated immediately after the failure. The lecture describes the investigation carried out including field observations before failure, a description of the geometry and mechanism of failure as well a number of analyses of the failure and of the post-failure dynamics. Special attention is given to the underlying causes of the failure that involve progressive failure and very high pore water pressures in the foundation.



Antonio Gens is a professor of Geotechnical Engineering at the Technical University of Catalonia in Barcelona where he has been Head of the Department of Geotechnical Engineering and Geosciences and member of the Governing Council of the University.



VENUE: E10 Lecture Theatre, School of Engineering, University of Canterbury

THURSDAY 13th May 2010

Light refreshments from 5.30pm
for 6.00pm start

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