Numerical 3D Simulation of Horizontal Leaching Processes

PAUL GRÖNEFELD, BOTHO SAALBACH,
Kavernen Bau- und Betriebsgesellschaft mbH (KBB),
Karl-Wiechert-Allee 4, 30625 Hannover, Germany

1 Introduction

In the past the use of computer simulation programs have proven effective in planning and optimising leaching processes.

Nowadays a number of programs are available which can simulate leaching processes for single wells. However, because in single well leaching process the dissolution takes place with around the well axis and so had rotational symmetry, all of these calculation models use cylindrical polar coordinates. Cylindrical models for the simulation of leaching processes are unable to answer a great many pertinent questions. For this reason a computer code has been developed which enables a Cartesian coordinate system to be used for simulating leaching processes.

This paper focuses less on the mathematical equations which are based on modified Darcy Equation [1, 2], then looking at a number of calculation examples.