FEFLOW – NUMERICAL MODELLING

STATE OF THE ART SOFTWARE FOR RELIABLE 2D/3D FLOW, MASS AND HEAT TRANSPORT MODELLING, BASED ON FINITE ELEMENT METHOD

- Hydrogeological, geothermal, geotechnical and environmental applications in complex environments
- All-in-one solution, powerful computational performance, visualization ability and import/export functionalities
ALL-IN-ON SOLUTION

FEFLOW is a commercial software package used by GEOTEST to simulate groundwater flow, contaminant and heat transport processes, at local to regional scale. FEFLOW integrates all typical modelling tasks starting for model setup, mesh generation, model calibration to export functionalities to GIS/Web-GIS or other visualization software.

MAIN FUNCTIONALITIES

• Fully integrated package
• Flow, Mass and Heat transport
• Flexible 2D/3D mesh
• Inverse modelling and uncertainty analysis (FePEST)
• Saturated/unsaturated, unconfined and confined aquifer
• Complex mass transport reactions
• Integration of 3D geological models
• Import/Export with standard industry software

FEFLOW provides an open programming interface to fit specific client needs.

FLEXIBILITY AND INTEROPERABILITY

The Finite Element technique allows a flexible meshing strategy and time discretization to fit the project needs. GEOTEST has experience in coupling FEFLOW with external tools either for model setup or visualization,

such as MOVE for 3D geological modelling or for advanced modelling purposes, such as coupling with 1D/2D surface flow modelling.

CUTTING-EDGE VISUALIZATION

FEFLOW offers cutting-edge visualization possibilities, such as 3D, planar or cross-sectional views. They encompass all model parameters and modelling results. Image and movies are a common way to represent the results for efficient communication with our clients and authorities.

FIELDS OF APPLICATION

• Groundwater management and protection
• Tunneling
• Engineering geology and geotechnics
• Geothermal energy
• Environment and contaminated sites
• Natural hazard and risk assessment
• Mining and natural resources

RELIABILITY

FEFLOW is the world’s leading tool for high-end groundwater modelling in complex environments. The code has been tested in rigorous and fully-documented benchmarks test and the physical bases are extensively documented. FEFLOW is widely used by leading consultants, government organizations and research institutions.

GEOTEST Ltd is working with FEFLOW for more than 10 years on a daily basis.