

Estimation of hydrogeological flow field based on the cross-hole hydraulic test

Shinji Takeuchi[1]

[1] JAEA Tono

Cross-hole hydraulic tests (CHT) were conducted to characterize the hydrogeological flow field in fractured rock. Boreholes instrumented with multi-level pressure monitoring systems, ranging from 100m to 1,000m in depth, were used as observation wells.

Type curve matching techniques, diagnostic pressure response plots and spatial plots of the distribution of observed pressure changes were used for analysis.

From the results of the tests, hydraulic boundaries including a flow barrier fault and connectivity between the boreholes were estimated. Application of the CHT are shown to be useful for characterization of the hydrogeological flow field in fractured rock.