

Improvement of pumping system for continuous monitoring of dissolved gas in groundwater

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<Abstract>

We report on the present situation of the continuous monitoring system of dissolved gas in groundwater. Two years ago we described a critical problem that water leakage from a gas extraction module is sometimes happen. Some possible causes were estimated but we could not solve the problem. When we removed a broken module from the ductwork just after leakage happened, we found that the pressure of the gas phase in the return path of the ductwork is too high. Then we measured the pressure of the gas phase, and the breakage test was carried out. As a result, the seal in a module is broken by the high pressure that is generated by erupted bubbles while pumping. Because we introduced a pressure reducer in the ductwork, the water leakage problem was settled in the last May. Owing to the pressure reducer, we have started to verify the effect of pumping on data. We will show the effect of pumping on the water level.