

## Estimation of groundwater flow by using SP method -approach from observation, experiment, and numerical simulation-

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Over the past few decades, self-potential (SP) surveys have been conducted and specific SP anomalies are observed on many fields. It is considered that the SP anomalies are mainly caused by streaming potential associated with subsurface groundwater flow. In general condition (zeta potential of rock is minus, and only gravity force is dominant), plus electric charges are carried by water flow, so that equivalent positive charge of streaming potential is expected at the lower part of the field, on the other hand, negative charge is expected at the upper area in comparison. Therefore, we can estimate the subsurface groundwater flow from self-potential profile on the field. In this presentation, we will discuss the current situation of estimation for subsurface groundwater flow by using self-potential method.