

## Permeability of fault and grain size distribution -Evaluation for the permeability of methane-hydrate bearing layers-

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Permeability of sediments is important factors for production of natural gas from natural gas hydrate bearing layers. Methane-hydrate is regarded as one of the potential resources of natural gas. As results of coring and logging, the existence of a large amount of methane-hydrate are estimated in the Nankai Trough, offshore central Japan, where has a lot of faults. For the purpose of a rational evaluation of permeability of methane-hydrate layers, it is important to understand properties of fault zone because of different condition from other layers due to large displacement shear. In this study, we investigated the permeability of a specimen formed artificial fault in ring-shear test. Moreover, under high and low normal stresses the difference in grain size distribution of shear zone and other zones were discussed. This study is financially supported by METI and Research Consortium for Methane Hydrate Resources in Japan (the MH21 Research Consortium).

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