Comparing physical properties of the sediments in the Japan Sea

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In 21 century, most of the methane hydrates distributed in the Japan Sea are by an outer layer type, and it is interpreted that developing in dozens of meters from the seabed of the mound with the gas chimney structure in a recent study (Matsumoto at. al.2014). Because the outer layer type methane hydrates are different from the depths type of the Nankai trough in many respects, we should prepare the new development scheme when producing tests in future. Therefore, this study focuses on the behavior of the sediment physics on the methane hydrate accumulations, and influence of the seafloor environment. When we would take methane hydrate near the seafloor, not only we are concerned about degradation of the seabed environment, but also we are apprehension about the ground sinking by the machine built and the effect of foundation pile exchanging to the poor subsoil by the degradation. On the other hand, it is essential to grasp stress of sediment of the depth profiling by examining the ground strength every depth because various work in the collection of the hydrate is performed in the deep layer.
Therefore, we had geotechnical tests, such as Vane share strength tests, Cone penetrate tests, and Water content tests, at the reference sites around the Oki and the Jyoetsu offing. In addition to study mechanical tests, we compared with MD179 results. This study was conducted as a part of the shallow methane hydrate exploration project of METI.

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