

Sedimental structure of methane hydrate bearing sediments of the eastern Nankai Trough

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MITI promoted the drilling project MITI Research well Off-Tokai to Kumano-nada in 2004 and methane hydrate bearing marine sediments were sampled by using Pressure Temperature Core Sampler (PTCS). Internal sedimental structures of cores were observed by X-ray computer tomography and their features were grasped. Also, grain size analysis had done to grasp its physical properties.

As a result of observation, Typical sedimental feature called as Bouma sequence can be seen within sandy layers. Many of them are Tb-d or Tc-d, in some case there are full sequence. According to seismic analysis and sequence stratigraphical studies suggested that the study area around MITI's research well is consisted of submarine fan system(Takano et .al. 2005).

We analyzed grain size distribution of these core sample to grasp not only for sedimentological importance but also engineering needs such as, permeability that is important for understanding dissociation process, production rate and stability of sediments. Result of analysis, we confirmed that lower part of turbidite does not show good sorting but stable mean diameter, middle part of Tb or Tc have good sorting (each D50} is 2.3-2.4φai and 2.8φai), and fine grain content distribution of Tc to Te.

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