



Submarine Sediments' Physical Properties of Continental Margin off SW Taiwan

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There have evidences show the southwest (SW) off Taiwan distributes abundant gas hydrate reservoirs. The gas hydrate resources were systematically surveyed by geological, geophysical and geochemical methods which were mainly emphasized on the storage potential evaluation. However, the geotechnical characteristics of submarine sediments are not quite clear and are needed to be well studied. Five surveyed sites (Xiaoliuqiu, Yuan-An Ridge, north of Kaoping submarine canyon, Pointer Ridge, and Palm Ridge), where located in the active and passive continental margin off SW Taiwan, are selected to study submarine sediments' physical properties. The gravity corers are obtained in these sites and perform laboratory soil tests. The physical properties obtained from active and passive continental margin are compared and discussed. Test results show that submarine sediments are highly porous soils and fines (particles smaller than 0.075mm) contents are mostly higher than 95%. The soils are generally classified as ML or MH (low or high plasticity silty soils). Most of the in situ natural water contents are more than LL (Atterberg liquid limit), as a result, it's sensitive and is hard to be remolded.