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GRAIN SIZE DISTRIBUTIONS AND DEPOSITIONAL PROCESSES IN NORTHERN TAIWAN STRAIT HSINCHU OFFSHORE AREA

GWO-SHYH SONG and MIN-PEN CHEN

ABSTRACT

Grain size cumulative curves and frequency distribution histograms of the sediments collected from Hsinchu offshore area indicate that the deposits in northern Taiwan Strait are recent sediments rather than relict sediments. The main sources of these sediments are terrigenous material discharged by Touchien, Chungkang and Houlung rivers.　The deposits carried by the currents from central Taiwan Strait are the second important source in this area.　The sediments delivered by the rivers in Southeast China are silty to very fine sandy and were carried to this area by the China coast longshore current. The monsoon drifting currents (in southwestern direction in fall and winter and in northeastern direction in spring and summer each year) are the main transportation agencies.　This interchanging effect is clearly implied by the grain size cumulative curves and only occurs in the sea floor almost 20 to 40 km off the coast. China coast longshore current may bring the sediments down to the core sites of HC-2 and HC-11 only.　The current in Taiwan Strait may deliver sandy deposits to core sites of HC-12, HC-13 and HC-14.　In this area, the faster depositional rate (as compared to the sorting rate) acted by waves and currents causes most of the grain size distribution curves to be fine-skewed because of the existence of fine grain portions.