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### Abstract

This study was carried out to search the properties of granulated blast furnace slag, which is a by-product from the manufacturing of iron, for the settlement of planktonic larvae of Japanese littleneck clam (*Ruditapes philippinarum*), as well as survival and grows of its young shells. In the settling experiment of planktonic larvae, the slag showed significantly higher density of settlers than the natural sand. In the results of comparison of the natural sand, silica sand and slag, the slag showed significantly higher density of settlers than the natural sand, silica sand, whereas there was no significant difference between the natural sand and silica sand. An analysis of the interstitial water showed that pH and the concentration of Si of slag was significantly higher than the natural sand. However, concentration of Mn, Fe, Al, Zn, Ti, Cr in the interstitial water of natural sand and slag was very low, and there was no significant difference between the natural sand and slag. In hydration experiments, there was significant difference in the change of pH, Si between the slag and natural sand, silica sand. Number of larval sinking to the bottom was significantly larger on the slag as compared to natural sand, silica sand. There was no significant difference in the number of larval sinking to the bottom in pH 8.0-9.2, and also in 1.12-11.12 ppm of Si concentration. For the results of experiment of effect on survival, there was no significant difference between pH 8.0 and pH 8.9, 9.2, and also between 1.12 ppm and 11.12 ppm of Si concentration. From results of analysis of the interstitial water and liquid concentration during

hydration, we were not able to confirm that Mn, Zn, Fe reported by the study of past may exert serious influence on the promoting factor of larval settlement of slag. When the slag was covered with the natural sand 5 mm thick, the density of larval settlement was lowered. From this result, we suggested the possibility of physical characteristics of slag.