

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

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HCG036-P06

Room:Convention Hall

Time:May 24 14:00-16:30

Fundamental Study on Development of Man-made Beachrock: Mechanical tests and elemental analyses of Beachrocks in Okinawa

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Beachrock is a coastal deposit that is cemented by calcium carbonate and/or silica in the tidal zone of a sandy beach in the tropical zone and the subtropical zone. Considering an application of man-made beachrock to submerged-looking islands as a preservation material, we had performed a literature survey in order to understand essential information of beachrocks. For the study of mechanical properties and mineral contents of beachrock, we performed in situ tests and laboratory tests for beachrocks of Okinawa Island. As a result, it was shown that unconfined compression strength of the beachrocks increased with time and presented about 43.75 MPa after several thousand years. It was also cleared that the strength of the beachrocks was larger than or equal to that of sea water proof concrete using cements of blast-furnace, silica, fly ash and others. Furthermore, it was found that the beachrocks investigated in this paper consisted mainly of Ca and C.

Keywords: beachrock, Okinawa Island, mechanical property, element content