

P-wave velocity of gabbroes from ODP and IODP cores: Implications for the origin of the P-wave velocity reduction in the lowermost oceanic crust

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Variety of gabbroic samples were taken from the Atlantic Ocean (ODP Legs 153 & 209, IODP Exps. 304&305), the Indian Ocean (the Atlantis Bank: ODP Legs 118 & 176) and the Pacific Ocean (Hess Deep: IODP Exp. 345). Those gabbroic core samples were originated from the upper part and lower part of the oceanic crust. The P-wave velocity of the samples were measured by the same machines and the methods on-board JOIDES Resolution. Here we argue a possibility of the velocity reduction where the oceanic lower crust is highly altered. A series of gabbroic cores from ICDP Oman Drilling will be expected this reveals more with detail examination of the relationship between the mineral mode, chemistry, the degree of alteration and P-wave velocity on-board D/V Chikyu.

Keywords: Oceanic Lower Crust, Gabbro, IODP, P-wave velocity, D/V Chikyu, Oman Chikyu Project