

The stress-strain history of metamorphic sole: the case study of Greece, Turkey, Oman and Andaman islands

HOSHINO, Kenta^{1*}

¹Shizuoka University, Graduate School of Science

Metamorphic sole is formed by intra-oceanic thrusting and is found in some locations around the world. Greece, Turkey, Oman and Andaman islands are Tethys type ophiolite exposed area. The microboudin method, which is palaeostress analysis, is based on the proportion of boudinaged mineral grains with respect to applied differential stress. In this study, we used columnar minerals bearing metacherts from four areas and examined the value of palaeodifferential stress. The microboudin method revealed the value of palaeodifferential stress is 3.3~24.8 MPa and we got stress-strain curve by using strain reversal method. The stress-strain curve indicate the stress history. Palaeodifferential stress increased until the end of deformation in all samples. This result show that peak P-T condition and peak differential stress are not simultaneous.

Keywords: microboudin, metamorphic sole, palaeodifferential stress, Tethys, stress-strain history