

Accretionary Complex Remained Between the Indochina and Sibumasu Blocks in Thailand: Implications for Direction of Subduction and Collision Tectonics

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Micro-continental collision between the Sibumasu and Indochina blocks was caused the closure of the Paleo-Tethyan ocean in the Late Triassic time. Triassic collision tectonics in the Paleo-Tethys region has been constructed by accretionary complex remained along western margin to the Indochina block. The Permo-Triassic accretionary complex is developed in Sa Kaeo-Chanthaburi area, western Thailand (Chutakositkanon et al., 2004). This accretionary complex is composed of chert clastic sequence and melange units (Hada et al., 1999), and is characterized by west verging imbricated structure. Paleo-geothermal structure by illite crystallinity is also suggested the accretion, metamorphism and uplift history as accretionary complex. Ueno and Hisada(2001) proposed new tectonic framework in Northern Thailand, and recognized the Inthanon and Sukhothai zones between the Sibumasu and Indochina blocks. The Inthanon zone is interpreted as thrusted zone of Paleo-Thethyan sedimentary rocks over the Sibumasu block, whereas the Shukhothai zone is the Late Paleozoic to Mesozoic volcanic arc. The main Paleo-Tethyan suture corresponds to the Inthanon zone, which is regarded to accretionary complex developed along western margin of the Shukhothai volcanic arc. On the basis of structural analysis for deformation structure, the Sibumasu block and the Inthanon zone are recognized in different phenomena associated with shorting of strata. Cleavages developed in the Sibumasu block present compaction of strata in the direction of NNE-SSW. On the other hand, the Inthanon zone is interpreted as thrusted zone occurred the stacking of strata through E-W. It is suggested that stress field with the closure of the Paleo-Tethyan ocean in the Late Triassic time was released by fold in the Sibumasu block, and by thrust in the Inthanon zone. Structural vergence estimated by deformation and geological structures indicates the direction of east to west, in the Sa Kaeo-Chanthaburi accretionary complex and the Inthanon zone. It means that the Paleo-Tethyan oceanic plate was subducted under the Indochina block through west to east.