

## An approach for site characterization using vein minerals in accretionary complex, Kii Peninsula Shimanto Belt in Japan

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This study has been investigated in order to analyze the deformation process in accretionary complex, Kii Peninsula Shimanto Belt in Japan. Field study, observation under microscope, analysis with X-ray Diffraction and Rb-Sr mineral isochron dating have been carried out. The purpose of this study is to develop the methodology using for site characterization when candidate sites are selected in coming near future.

Results of detailed analysis of geological structure and deformation structures, vein structures shows that accretion refer to deformation during the depth in subduction zone and expect from deformation at shallow zone. In particular, deformation stages are classified into three stages as follows; stage 1 is the deformations before accretion, stage 2 is during accretion, stage 3 is after accretion. This study has revealed that alternated minerals and veins have the distinct features, composed mineral and veins structures, in each stage and each formation. Moreover, we tried to determine the age of veining by applying the Rb-Sr mineral isochron method to some vein minerals.

In addition, deformation condition is inferred according to the relation with deformation structures, vein structures and altered minerals. It is also suggested generating temperature condition of vein minerals and deformation structures. The condition is significant for understanding deformation process in accretionary complex. This kind of information can be necessary to assess the long-term stability of candidate sites selected in accretionary complex in Japan.