

Characteristics of process zone accompanying an intermediate-size fault: The Usukidani Fault, Southwest Japan

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A fault is accompanied with the zone composed of fault rocks and a process zone is extensively developed outside the fault-rock zone. The process zone must be related to the formation of the fault. In order to clarify characteristics of the process zone accompanying an intermediate-size fault, field mapping, investigation of fault outcrops and observations by an optical microscope were performed for the Usukidani fault in western Shimane Prefecture of southwest Japan. The process zone of the Usukidani fault shows a spindle form and is distributed symmetrically with the respect to the fault surface. It is pointed out that the maximum width of the process zone is one-order larger than the fault-rock zone. The maximum width is two-order smaller than the length of the fault.