

The influence of the fractured zone that affects on the short-term strain variation. -the strain variations in the Yamasaki fault-

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In order to investigate the singularity of the fractured zone, the comparison between strain steps observed by two stations, Osawa and Yasutomi. Osawa observation vault, about 3km apart from the Ohara fault is constructed in the rigid and homogeneous rock. On the contrary, Yasutomi observation vault is settled in the fractured zone of the Yamasaki fault. Concerning the strain steps caused by earthquakes, their amplitudes observed at Yasutomi, inside the fractured zone, are frequently one to three order greater than those expected theoretically. Furthermore, the directions of principal strain axes at Yasutomi derived from strain steps have a tendency to be restricted to the fault direction, and not depend on the earthquakes which generated those steps. On the contrary, the strain steps observed at Osawa are, in some extent, close to those expected theoretically. At both stations, non-seismic strain steps which have no corresponding earthquake are occasionally observed. Frequency and amplitude of those non-seismic steps at Yasutomi are usually greater than those at Osawa. Comparing those short-term strain variations at both stations, it can be thought that the fractured zone give some kinds of singular effect on the strain variation in and near the fault.