

Fluidization of fault gouge: A new method of the identification and the normal interface vibration as its cause.

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We have developed a new method how to identify whether fault gouges have experienced fluidization or not. The key parameter of this method is the identification probability of fragmented counterparts. We could successfully apply this method to four samples.

A key cause of the phase transition from the grain friction regime to fluidization is the slight decrease of the volume fraction of grains normalized by maximum volume fraction attainable. This can be realized by the widening of fault wall gap by the normal interface vibration proposed by Brune et al.(1993).