

Fault geometry and paleo movement of the central part of Ushikubi fault,northern Central Japan

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The Ushikubi fault,located on the Toyama/Gifu prefectural boundary is one of the longest active fault in Japan.It is necessary in not only scientific fault research even in the prevention of disasters to make essence clear.Moreover,it is thought from recent GPS observation that this fault has carried out important role in the Niigata-Kobe Tectonic Zone(Ooi et al,2003,Matsuura&Takeuchi,2003).But it is not researched geologically well.So, we performed morphological and structural analysis based on geological survey of the central part of Ushikubi fault.As a result,we identified fault geometry and paleo movement of this fault.The statement items which described at field is as follows.Type of fracture zone, Type of fault rocks, strike and dip angle, width, deformation texture, color of fault rocks, protolith, protolith structure, etc.

Results are described below.

1) Along the Ushikubi fault(as the active fault),multiple fracture zone are branched, bent, paralleled, slanted intersection,and formed pretty complicated geometry.Especially in the central region,fracture zone makes Strike-slip duplex (Woodcock&Fischer,1986).

2) Geometry of fracture zone and duplex form indicate it took place for sinistrial strike-slip fault.In addition,observation of polished section and thin section supports this result.

3) Width of the fault gouge which was formed by hydrothermal alteration is thick in the NNE trending fracture zone.It does not match present stress situation(Transpression). On the other hand,it is possible to explanation that it was formed under opposite stress situation.

In this study,these fracture zones which along the Ushikubi fault calls Ushikubi fracture zone(New name).This fracture zone is generated for sinistrial strike-slip fault,and Ushikubi fault as an active fault is reactivity of the Ushikubi damage zone.

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