

THREE SYSTEMS OF THE APPROXIMATELY PERPENDICULAR PRECURSORY JOINTS BESIDE OF THE WRENCH, REVERSE AND NORMAL FAULTS

SEMINSKY, K. ZH. The Institute of the Earth's Crust, Siberian Branch of RAS, Irkutsk, Russia

The types and distribution of precursory joints were studied beside of the wrench, reverse and normal faults of the Sayan-Baikal mountain area, Vietnam, Pamir and Southern Tien-Shan. The computer analysis of statistical measurements has shown, that the pattern of three approximately perpendicular systems of joints is widely practised. The main system takes a subparallel position to a plane of the fault and is most widespread. The minor system is characterized by the least density. It takes a vertical position near to wrench, whereas at reverse and normal faults it coincides with a strike of the first system, but has an opposite dip. The additional system takes a transversal position to two first and, thus it coincides with a direction of the transport of substance during deformation. Three orthogonal systems of joints are formed in one dynamic situation because variations of the stress field during fracturing at the brittle rock. Triple patterns with identical orientation of joints mark out the fault zones, and the spatial zoning of their disposition allows to determine a dynamic conditions of the structure formation (compression, extension or shear). Thus, the analysis of orientations a trivial joints can be a basis for receipt the important information about faults (sizes of zones of their influence, genetic type, features of an internal structure etc.) even the usual indications of their existence are absent.