

THE LIMITATIONS OF THE KINEMATIC INDICATORS

MIERZEJEWSKI, MICHAL Institute of Geological Sciences, Wroclaw University, Poland ABDELWAHED, MOHAMED Geology Department, Faculty of Science, Tanta University, Egypt

The value of the kinematic indicators, in many cases is doubtful. In the great outcrops of gneisses one can observe that in different levels (banks) the kinematic indicators point out movements in opposite direction. Some of geologists, in such cases, adopt statistical methods what is not a best solution and what is a signal, we don't know the nature of the observed phenomena. In Sudetes mountains (Poland) within the serpentinite from the Sleza ophiolite complex, there are many overthrusts of listric geometry, where the vergance of the movement is obvious. On the other hand, the kinematic indicators exhibit movements in two directions. In the lower part of the displaced block, the kinematic indicators, such as drag folds, bedded magnesite veins, rotated chromite and antigorite porphyroclasts and kinked mylonitic foliation, indicate the same direction of movement as the listric overthrust surfaces. In the upper part of the rock displaced (in the same overthrust body) the kinematic indicators change thier meaning basicaly. The trails of the tectonoclasts point out a reverse movement, down, and paralle to the dip of the overthrust surface. Consequently, the overthrust behavior is like a wave on the beach, goes up to the shore and then down to the sea. Therefore, if some body interpret the kinematic indicators, he have to know in which part of the overthrust body he made the observations.