



Anomalous structural trends within low strain zones

H. Lee (1) and T. W. Chang (2)

(1) Korea Institute of Nuclear Safety (heanu@kins.re.kr), (2) Kyungpook National University (twchang@knu.ac.kr)

The fragility of structures in the matrix of rocks that have been multiply deformed commonly results in geometries that are too complex, or sometimes too simple, to readily allow a structural geologist to reconstruct the complete deformation history of a rock. Complexities are commonly overlooked or ignored because they are attributed to heterogeneities in the flow field. However, each deflection in a foliation, which does not accord with the effects of a simple anastomosing geometry, could be very useful in resolving the deformation history. Such deflections should be explicable if we understand fully all the deformations that have occurred and, consequently, have a complete comprehension of the tectonic history that the rocks have been through.

This paper describes anomalous zone of NW-SE-trending rocks from the NE-trending Ogcheon Orogenic Belt in South Korea at range of scales. These rocks preserve several generations of crenulations within the matrix and porphyroblasts as observed under the microscope. The very phenomena can be observed in north-eastern portion of the Ogcheon Orogenic Belt, where the regional NE-SW trends of the belt are rotated into a local NW-SE trend. This study using regional and micro-structural analysis indicates the NW-SE trends probably formed prior to the regional NE trending structures.