

## Vertical distributions of the lamination sheeting in a granite drilling core of 750m in depth

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Closely spaced parallel subhorizontal fractures are widely distributed in the coarse grained granite, as seen in the subsurface of the study areas, and are named LAMINATION SHEETING. The lamination sheeting changes the nature and spacing following the depth from the land surface. The vertical variation of the nature and frequency was analyzed upon the cores of 750m in length drilled at Okayama City in Southwest Japan. The lamination sheeting fractures truncate the grain boundaries of the constituent minerals, suggesting that they are tensile fractures without lateral dislocation. Generally the spacing of the lamination sheeting fractures is in the order of millimeter, but it changes with increasing depth. The frequency and spacing of the lamination sheeting are measured for each column of ten meters. The result shows that the vertical distribution patterns vary according to the depth. Three zones of coherent pattern are distinguished: Upper zone covering the column from 0 to 220m depth, middle zone from 220 to 420m, and lower zone from 420 to 750m. Each zone shows a particular pattern of the lamination sheeting distribution. In the Upper zone, the lamination sheeting planes occur pervasively at 136 horizons throughout the whole length. The average minimum spacing of lamination sheeting fractures is invariably 3.8 mm/10m. In the Middle zone, the lamination sheeting is distinctly rare, and occurs only at 19 horizons. The occurrence is discontinuous. The average minimum spacing of that is 9.5mm/10m. In the Lower zone, the lamination sheeting appears at 3 horizons, and disappears in more than 510m depth. These facts suggest strongly that the lamination sheeting was formed by the stress release, resulted from the unloading of the overburden by erosion.