

English abstrakt

This thesis is focused on emplacement mechanisms of granitic magma into upper continental crust. The studied area is the Říčany pluton due to its unusual and asymmetric shape. Therefore, it represents a suitable intrusion for interpretation different models referring to emplacement of granitic magma. Common model for ascent of magma is incremental dikeing in present. The Říčany pluton of the Central Bohemian Plutonic Complex is a post-tectonic elliptical shallow-level intrusion emplaced into low-grade Neoproterozoic and Lower Carboniferous times (~337 Ma). It comprises of outer, more fractionated, strongly porphyritic granite and inner, less evolved, weakly porphyritic granite. Mesoscopic foliation represents an onion-skin pattern and corresponds well to the magnetic (AMS) foliations. Magnetic lineation has a gentle dip (0–20°) and closely parallels with the pluton contact in its outer part whereas the lineation dips steeply (60–70°) with a variable trend in the pluton interior. Author interprets these fabrics as a result of a helical flow, which is a faster subvertical flow in the low-viscosity pluton centre being accompanied by a subhorizontal flow in the outer, higher-viscosity (phenocryst-rich) margin. The proposed scenario of the helical magma flow can provide a viable mechanism for the transport of granitic magmas into upper levels of the Earth's crust.