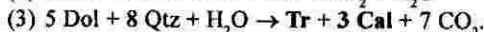
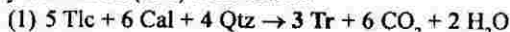


study of metamorphic reactions producing tremolite. Using transmitted light and CL, several mineral reactions producing early tremolite I (Tr I) were found:



Participation of reaction (1) is supported by the textural relations of early calcite (Cal I), with characteristic deep orange colour in CL image, associated with relics of quartz Qtz (blue CL) and grains of Tr I. Both Cal I and Tr I underwent brittle deformation and their angular grains are rimmed and healed by younger Cal II (bright orange CL). Formation of Cal II is very likely not related to reaction (1), but rather represents a recrystallization of Cal I. Rare equilibrium assemblage Tr I + Dol (red CL) suggests mineral reaction (2). Rare relics of Dol (dark red CL) and Qtz (blue CL) found in large porphyroblasts of Tr I also indicate a participation of mineral reaction (3) (e.g., Olešnice and Jobova Lhota). Rare diopside (green CL) in rims around Tr I was observed in marbles near their contact with the higher-grade Moldanubian Zone. It was formed by the reaction:  $\text{Tr} + 3 \text{ Cal} + 2 \text{ Qtz} = 5 \text{ Di} + 3 \text{ CO}_2 + \text{H}_2\text{O}$ . The latest Cal III (pale yellow CL) commonly fills cracks in some silicates, e.g. in retrograde Tlc, and originated during the latest metamorphic stage or in the zone of weathering.

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# Magnetic Fabric and Magma Flow in Some Mafic Dikes of the Central Bohemian Pluton and its Surroundings

František HROUDA<sup>1,2</sup>, František V. HOLUB<sup>1</sup> and Karel ŠC HULMANN<sup>1</sup>

<sup>1</sup> Institute of Petrology and Structural Geology, Charles University, 128 43 Praha, Czech Republic

<sup>2</sup> AGICO Inc., 621 00 Brno, Czech Republic

Creation and propagation of dikes is one of the important mechanisms of the mass transport within the Earth's crust. Details of this mass transfer can be advantageously studied using anisotropy of magnetic susceptibility (AMS) which is a rapid and efficient geophysical (petrophysical) method for investigation of the preferred orientation of magnetic minerals (magnetic fabric) in rocks. The purpose of the present contribution is to investigate the AMS of mafic dikes occurring in the Central Bohemian Pluton and its surroundings from the point of view of tracing magma motion in dikes.

Magnetic fabric in six mafic dikes was investigated. The oriented specimens were drilled using portable drilling machine and oriented using geological compass mounted on special orientating fixture. The AMS was measured with the KLY-3S Kappabridge. In order to obtain a statistical evaluation of the AMS

in individual localities and in whole geological bodies, recourse was had to the ANISOFT package of programs, which enable a complete statistical evaluation of a group of specimens to be carried out.

Mostly, the magnetic foliation is roughly parallel to the dike plane and the magnetic lineation is horizontal and rarely vertical. This magnetic fabric originated through magma flow in which the larger surfaces of the magnetic minerals are oriented parallel to the dike plane and their longer dimensions are parallel to the magma flow. In two localities, the so called inverse fabrics were found in which the maximum and minimum susceptibility directions are interchanged. This is probably due to presence of very small single domain magnetic particles in these dikes.