

Supervisor's opinion on PhD thesis of Mr. Promoda Kumar Behera, M.Sc.

Thesis title: Influence Of High Temperatures on Properties of Geopolymers Filled by Inorganic Fibrous Particles

Mr. Promoda Kumar Behera, M.Sc., has worked for his PhD thesis under my supervision since 2014. The PhD thesis titled "Influence of High Temperatures on Properties of Geopolymers Filled by Inorganic Fibrous Particles" is quite comprehensive and fulfills the objectives outlined in his thesis. The thesis systematically investigated the effects of incorporation of inexpensive inorganic microfibers (basalt microfibrils and carbon microfibers) on the structure and thermal evolution of geopolymers synthesized from metakaoline. He developed expertise in preparation of particles by ball milling, preparation of geopolymer composites, characterization of their microstructure by SEM, EDS, Image analysis, XRD, TGA and testing of mechanical properties by measurement of compression strength, hardness, density, etc. The candidate has done all his work quite systematically, on required scientific level, with specific objectives. Discussion of the results is comprehensive and logical with citations of previous work where necessary. The quality of figures and tables is good and understandable. The language level of the thesis is good and meets the PhD standard. His publication activities are in excellent level. He has published 6 papers in international journals with impact factor. A few more are under review and expected to be published soon. He has presented more than 5 papers individually or jointly at international conferences, 2 chapters are published in reputed books. These are strong indicators for his thesis as a comprehensive work of independent research.

I therefore recommend the thesis for defense.



prof. Ing. Jiří Militký, CSc.
Supervisor

