



Contribution ID: 32

Type: Poster

Mechanical properties of cement paste containing iron powder

Wednesday 24 May 2017 15:45 (15 minutes)

Mechanical properties of cement paste containing iron powder

Nattapong Chuewongkam¹, Panjasil Payakaniti², Supree Pinitsoontorn^{1,2,3}

¹Department of Physics, Faculty of Science, KhonKaen University, KhonKaen 40002 THAILAND

² Materials Science and Nanotechnology Program, Department of Physics, Faculty of Science, KhonKaen University, KhonKaen 40002, Thailand

³Integrated Nanotechnology Research Center, Department of Physics, Faculty of Science, KhonKaen University, KhonKaen 40002 THAILAND

Abstract

This research project studied the mechanical properties of the iron paste containing metal powder. The amounts of the iron powder additives were 10, 20, 30, 40, 50, 60 and 70% by weight of cement. Water to cement ratio was controlled by measuring workability. The universal testing machine as used to measure mechanical property. Which showed that adding iron powder enhanced the compressive strength of the cement paste. The microstructure was studied by using a scanning electron microscope. The correlation between microstructure and strength was discussed.

Keywords: Cement paste; Iron powder; Compressive Strength

Authors: Mr CHUEWONGKAM, Nattapong (Department of Physics); Ms PAYAKANITI, Panjasil (Khon Kaen University); Mr PINITSOONTORN, Supree (Khon Kaen University)

Presenter: Mr CHUEWONGKAM, Nattapong (Department of Physics)

Session Classification: Poster Presentation I

Track Classification: Nanoscale Physics and Nanotechnology