Abstract

This paper considers calcined silt resulting from the dam as an alternative source of metakaolin, an established supplementary cementitious material. The heat treatment (calcinations at 750 °C) makes the silt more active by the transformation of the kaolin contained in this silt into metakaolin. The effects of this recycled metakaolin (calcined silt CS) on the rheology of cement pastes of the self-compacting concrete SCC, have been studied and compared to the effects of mineral admixtures (ground granulated blast-furnace slag GGBS and natural pozzolan P). The effects are not similar and the results show that calcined silt has the potential to be used as a supplementary cementitious material from the point of view of the rheological behavior. This offers a route for utilising this silt material, as an alternative to the increased environmental burden associated with the production of metakaolin from natural kaolinite resources