Influence of palm oil fuel ash in reducIng heat of hydration of concrete

Abstract

The utilisation of pozzolanic materials in concrete construction has become increasingly widespread in recent years, and this trend is expected to continue in the years ahead because of technological, economical and ecological advantages of the materials. This paper highlights test results on the performance behaviour of a relatively new variety of pozzolan called palm oil fuel ash (POFA) in reducing the heat of hydration of concrete. Two concrete mixes namely concrete with 100% OPC, as control and concrete with 70% OPC and 30% POFA were prepared, and the temperature rise due to heat of hydration in both the mixes was recorded. It has been found that palm oil fuel ash not only reduced the total temperature rise but also delayed the time at which the peak temperature occurred.