

Study and characterisation of ancient terracotta ring well found at the excavation site in pattaraiperumbudur, tamilnadu, India

Abstract

This investigation is on the terracotta sample taken from the terracotta ring well expected to be built during the iron age period, excavates at Pattaraiperumbudur, Tamil Nadu, India. The sample was examined using FE-SEM with the aid of EDX, XRD and TG-DTA test to find the mineralogical composition, morphology and the production technology of the sample. From XRD results it was clear that quartz and feldspar were in higher percentage in the sample. The firing temperature was found to be between 600-900 °C at oxidizing atmosphere, using the FE-SEM test. The physical properties of the sample were studied using water absorption and porosity test which gave an idea about the less porous structure of the sample and thus lower burning temperature. The firing temperature at the time of manufacturing is estimated by the TG-DTA test as 600-900°C and it also agrees with the FE-SEM and porosity.

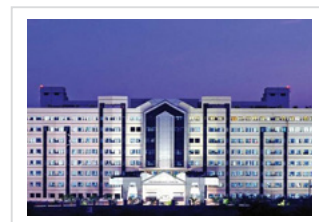
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