

Dome conditions in coastal city in tropical climate

Abstract

The paper describes the long-term monitoring of the finishes performance of the building with dome structure located in coastal area. The theoretical proposal is based on relevant literature and was applied and adjusted in a survey of 24 buildings. Majority building in the study is composed of mosque buildings and followed by government buildings and business and office building. As the building must also be in good condition to serve their purpose, there was concern about the effect of the outdoor factor on the durability of the building finishes. The main objective of the monitoring was to assess the effect of the environment in coastal area on the building finishes. The study included the correlation between dome condition with age, coastal distance, mean sea level height, material finishes and dome size. This paper explains the monitoring and results approach. The results indicated that the finishes use of various building materials has a different effect on the outer finishing conditions of the dome. Majority dome using concrete finish is in good condition compared to the dome that uses metal sheet finish. This defect can be seen from the connecting part of the metal sheet panel. This is due to the incorrect or inaccurate installation method.