

Keynote Address 1

Prof. M. P. Ranaweera

B.Sc. Eng. (Ceylon), Civil Engineering, Ph.D. (Cambridge), Structural Engineering
Emeritus Professor of Civil Engineering, Faculty of Engineering,
Department of Civil Engineering, University of Peradeniya,
Peradeniya, 20400, Sri Lanka.



ANCIENT STUPAS OF SRI LANKA - SOME TECHNOLOGICAL ASPECTS

Ancient Stupas of Sri Lanka are solid structures, mostly composed of burnt bricks. Some of them date back to the 3rd century BC, and some attained gigantic proportions, making them the largest brick structures in the world. The Jetavana Stupa, built by King Mahasena in the 3rd century AD, is deemed to have reached a height of 122 m, making it the third tallest structure in the world at one time and it is still the largest brick structure in the world.

In the design and construction of these Stupas, ancient builders of Sri Lanka have taken great care in the selection of the sites, geometries, materials, setting out, construction supervision and management, and sustainability. This presentation deals with some technological features of these historical structures with particular reference to their architecture, materials, internal stresses, foundations and construction. Some engineering aspects which have gone into the contemporary conservation & restoration of some notable Stupas are also presented.