

# **EN APPROACH TO COMPRESSIVE STRENGTH OF CONCRETE**

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## **ABSTRACT**

The design of concrete structures in EN 1992-1-1 is based on the compressive strength of cylinder specimens of 150 mm diameter x 300 mm in length. The specification for concrete in EN 206 includes the use of both 150 mm x 300 mm cylinder specimens and 150 mm cube specimens for production conformity testing for concrete compressive strength. In UK BS 8500 and also in Singapore SS 544 compressive strength based on 100 mm cube specimens are to be evaluated on the same basis as 150 mm cube specimens. Hence, the relationship between these three types of standard specimens for determination of compressive strength of designed concrete is of interest, particularly when 100 mm cubes are adopted for conformity assessment in concrete production. Verifying the relationships between the three types of standard specimens based on local materials and tropical curing temperatures is important to all stakeholders in the concrete industry. An extensive program of testing for three selected strength classes, C32/40, C50/60 and C65/80 each for over 100 batches over a period of more than 5 months has been carried out. The findings are reported in this paper.

Keywords: EN standard, concrete, compressive strength, standard specimen