**Mixing Ratio in Concrete**

**ABSTRACT**

The construction of buildings by incompetent craftsmen and the use of low quality building materials, including low quality concrete have been identified in the literature as two of the major reasons for the incessant collapse of building in Nigeria. The roadside craftsmen/artisans usually/generally construct buildings using 1:2:4 cement-fine aggregate-large aggregate mix ratio irrespective of the cement strength class. In this paper, the investigation conducted to determine the appropriate concrete mix ratios required to produce Class 20/25 and Class 25/30 concretes commonly used for design of building structural members using the Portland-limestone cement grades 32.5 and 42.5 that are available in the Nigerian open market is presented. Investigation revealed that the cube compressive strength of 1:2:4 concrete produced with Portland-limestone cement grade 32.5 is less than the minimum 25MPa required for concrete Class 20/25 and a richer 1:1.5:3 concrete produced with Portland-limestone cement grade 32.5 may be needed to produce concrete Class 20/25. Investigation also revealed that Portlandlimestone cement grade 32.5 may not be suitable for the production of concrete class 25/30 with cube compressive strength of 30MPa as the cube compressive strength of 1:1:2 concrete produced with Portland-limestone cement grade 32.5 may not attain 30MPa. Concrete strength classes 20/25 and class 25/30 can be produced with Portland-limestone cement grade 42.5 using 1:2:4 and 1:1.5:3 mix ratios respectively. To produce concrete with strength class C20/25 which is the minimum concrete strength class recommended for the construction of the load-bearing building structural members using the 1:2:4 mix ratio, Portland-limestone cement grade 42.5 is required.