

High Performance Concrete Using “BAUT” (Metal Aggregates) the Gateway to New Concrete Technology for Mega Structures

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Abstract : Concrete technology has been changing rapidly and constantly since its discovery. Concrete is the most widely used man-made construction material, versatility of making concrete is the 2nd largest consumed material on earth. In this paper an effort has been made to use metal aggregates in concrete has been discussed, the metal aggregates has been named as “BAUT” which had outstandingly qualities to resist shear, tension and compression forces. In this paper, COARSE BAUT AGGREGATES (C.B.A.) 10mm & 20mm and FINE BAUT AGGREGATES (F.B.A.) 3mm were divided and used for making high performance concrete (H.P.C). This “BAUT” had cutting edge technology through draft and design by the use of Auto CAD, ANSYS software can be used effectively In this research paper we study high performance concrete (H.P.C) with “BAUT” and consider the grade of M65 and finally we achieved the result of 90-95 Mpa (high compressive strength) for mega structures and irregular structures where center of gravity (CG) is not balanced. High Performance BAUT Concrete is the extraordinary qualities like long-term performance, no sorptivity by BAUT AGGREGATES, better rheological, mechanical and durability proportion that conventional concrete. This high strength BAUT concrete using “BAUT” is applied in the construction of mega structure like skyscrapers, dam, marine/offshore structures, nuclear power plants, bridges, blats and impact resistance structures. High Performance BAUT Concrete which is a controlled concrete possesses invariable high strength, reasonable workability and negligibly permeability as compare to conventional concrete by the mix of Super Plasticizers (SMF), silica fume and fly ash.

Keywords : BAUT, High Strength Concrete, High Performance Concrete, Fine BAUT Aggregate, Coarse BAUT Aggregate, metal aggregates, cutting edge technology

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