

Recent Advancement in Sustainable Concrete Technology

Er. Maheswar Mallick*, Er. Prabhat Kumar Singh**, Er. Subhardipta
Pattnayak***

*Department of Civil Engineering, Swami Vivekananda School of Engineering 7 Technology, Chaitanya Prasad,
Madanpur, Bhubaneswar, Odisha-752054

**Department of Civil Engineering, Swami Vivekananda School of Engineering 7 Technology, Chaitanya Prasad,
Madanpur, Bhubaneswar, Odisha-752054

***Department of Civil Engineering, Swami Vivekananda School of Engineering 7 Technology, Chaitanya
Prasad, Madanpur, Bhubaneswar, Odisha-752054

ABSTRACT –

Concrete technology is a process to make a construction. High technical methods are used in concrete technology also create an inspirable technology for construction projects. Concrete is a bonding material its use in every construction every projects. The advance technologies are always found out a quality technique to grow up. The technology gives more sustainable concrete technology to make every project essay and qualitative.

Keywords: Concrete, construction qualitative

I. INTRODUCTION

Concrete technology is the combination of concrete and new new technique. The use of cementing dates back to several hundred years. The ancient Egyptians used claimed Impure gypsum to get the space between huge rocks of stone in pyramid. Concrete is comprised of Portland cement, fine aggregate coarse aggregate, water, pozzolans, and air. The term High performance concrete was first introduced by NIST, FHWA, COE and ACI in early 1990s. Concrete meeting special performance requirements that cannot always behaved routinely using conventional constituents and normal mixing, placing, and curing practices. The direct advantage of High performances concrete construction schedule is the early stripping of formwork. In addition, the greater stiffness and higher axial strength allows for the use smaller columns in the construction. This will improve the construction schedule by reducing the amount of concrete that must be placed. These factors combined lead to construction elements of high economic efficiency, high utility, and long-term engineering economy.

GREEN CONCRETE

Concrete which is made from concrete wastes that are eco-friendly are called as "green concrete. Green concrete is a term given to a concrete that has had extra steps taken in the mix-design and placement to insure a sustainable structure and a long life cycle with a low maintained surface. e.g. Energy saving, CO₂ emission wastewater. Today the world green is not just limited to colour, it represents the environment, which is surrounding us. Green concrete is a revolutionary topic in the history of concrete industry. The enables this, new technology is developed. The technology considers all phases of concrete constructions life cycle, that is structural design, specification, manufacturing and maintenance. and it includes all aspects of performance.

TRANSPARENT CONCRETE

Transparent concrete also called as translucent concrete or light transmitting concrete is achieved by replacing aggregates with transparent alternate materials. The bonding material in transparent concrete may be able to transmit light by using clear resins the concrete mix. Use of optical fibres and fine concrete also used as transparent concrete. Transparent concrete was originally developed in 2001 by a Hungarian architect Analoon by using glass fibers. Transparent concrete is produced by mixing 4% to 5% (by volume) optical fibers in the concrete mixture. This concrete has less weight compared to original concrete.

II. CONCLUSION

The following general conclusions can be drawn from a review of the presented literature. With proper design methodologies and consideration of the characteristics of the constituent materials Sustainable concrete can be used for structural applications with equivalent or superior performance to Conventional concrete. More research is needed on the use of low-cement concrete with RCA to optimized mix design Methodologies for sustainable concrete for o develop structural applications. Multi-scale assessments are critical to develop a deeper understanding of the physical and chemical Processes affecting the behaviour of sustainable concrete materials at the microscopic and macroscopic Scales, and correlate the material characteristics to large-scale structural responso; Experimental research is needed to comprehensively investigate the behaviour of large-scale structural

Elements made with sustainable concrete to increase confidence for their use in field applications

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