To

Editor-in-chief

Journal of Architectural Environment & Structural Engineering Research

**Subject:** Submission of technical paper titled “EXPERIMENTAL SHEAR STUDY ON REINFORCED HIGH STRENGTH CONCRETE BEAMS MADE USING BLENDED CEMENT”

Dear Sir,

We are submitting a technical paper titled “EXPERIMENTAL SHEAR STUDY ON REINFORCED HIGH STRENGTH CONCRETE BEAMS MADE USING BLENDED CEMENT”. The author details are as follows:

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This paper presents the behavior of reinforced HSC beams in shear with considering the effects of various factors like shear reinforcement ratio, longitudinal reinforcement ratio, l/d ratio (length to depth ratio), etc. Shear failure of the RCC members is very catastrophic and can lead to disaster if not taken care of with adequate factor of safety. Therefore, this study was carried out to qualitatively quantify the failure of RCC beams in shear and guidelines for shear design are given so that adequate safety is ensured. Ten numbers Reinforced Concrete Beams of various sizes using concrete mix with three different w/c ratios (0.46, 0.26 and 0.21) were cast for shear strength assessment. The beams were tested in simply supported condition over two fixed steel pedestals with load rate of 0.2 mm/minute in displacement control. Mid-point deflection was measured using LVDT. A comparative analysis of theoretical approaches of Euro code, extension of current IS code up to M90 and the experimental data was done to understand the behavior of beams. Shear capacities of beams without any factors of safety were used to assess the actual capacities and then was compared with the experimental capacity obtained. Results of this study can be used in the design of high strength concrete and will be more reliable in Indian continent as the regional materials and exposure conditions were considered.

I Vikas Patel, being Co-Author of the paper confirms that the paper has not been submitted to any other journal/publication and is solemnly based on the research carried out at the National Council for Cement and Building Materials, Ballabgarh, Haryana and no additional grant/fund was taken from any other institution/organisation. The co-authors of the paper are the members of the Research project and all the member were involved in the experimental and analysis work which resulted into the formulation of this manuscript.

Further, myself Vikas Patel and Brijesh Singh were the project members and were responsible for execution of experimental work and P N Ojha and V V Arora being programme leader were involved in finalising the experimental program. Analysis and preparation of the report/paper was the combined responsibility of all the members.

Please let us know if any further clarification/details are required for process of publication.

Thanks and regards

Vikas Patel

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