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FACULTY OF SCIENCE AND TECHNOLOGY

DEPARTMENT of

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"Recycled aggregate concrete in the mainland of China: From laboratory work to engineering practice"

by

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Time: **11:45AM – 12:45PM**

Venue: **E33 - 1030**

Abstract

This report firstly presents a brief introduction on the current state of study on recycled aggregate concrete (RAC) in PR China, which includes mechanical property of RAC material, structural behavior of RAC load-bearing elements, and seismic performance of RAC frame structures. The experimental study results prove that it is feasible to apply RAC as a structure material in building structures. Secondly, this report presents an outline of Chinese technical codes for recycled aggregate concrete organized and edited by the speaker. Thirdly, it also puts forward some successful applications of RAC in building structures in the mainland of China which will be helpful to promote and popularize RAC as one kind of ecological structural materials in the world.

Biography

CURRENT POSITION

Jianzhuang is the director of Research Section of Recycled Concrete Structure & Construction in the College of Civil Engineering, Tongji University. He is the current chairman of the Committee of Recycled Concrete in PR China, and he is the chairman of an RILEM Technical Committee and the current deputy chairman of the High-strength/High-performance Concrete Committee in PR China.

EDUCATION

Jianzhuang received his PhD in structural engineering at Tongji University. He was awarded the Distinguished Young Scholars of China by the National Natural Science Foundation of PR China and the Alexander von Humboldt Foundation fellowship in Germany.

RESEARCH

He is a full professor in the Structural Engineering Department at Tongji University, Shanghai, PR China. His research interests include the material property and structural behavior of recycled aggregate concrete.

MAIN EXPERTISE AND SKILLS

Jianzhuang has been engaged in the fundamental research on material properties, durability performance and structural behavior of recycled aggregate concrete (**RAC**) for more than 10 years.

His main expertise and research experience in the area of recycled aggregate concrete (**RAC**) include the followings: (1) experimental research on workability and micro- and meso-structure of RAC; (2) experimental study on mechanical properties of RAC material under static, dynamic and fire condition: strength, elastic modulus, stress–strain curve; (3) theoretical analysis and experimental investigation on durability performance of RAC: carbonization, chloride diffusion, shrinkage and creep; and (4) experimental research and numerical simulation on the structural behavior of RAC elements and structures: beams, columns, slabs, beam–column joints as well as frames made with RAC.

He has won 2 first-class and 5 second-class Awards of Scientific and Technology Progress in China. He has 10 authorized national invention patents. He chaired 4 international and national academic conferences. He is the author of 2 Chinese monographs. He gave 12 invited keynote speeches. He published more than 60 papers in the Science Citation Index (SCI) international journals and over 130 papers in the Engineering Index (EI) journals. He edited the first Technical Code for Recycled Aggregate Concrete in PR China

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