

Keynote Paper

Steel and Composite Structures: Key challenges and trends for the future

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ABSTRACT

Steel and steel-concrete composite structures have formed an important part of civil engineering infrastructure for over a century. This is best evidenced by the world's tallest buildings and longest span bridges all employing innovations in steel or steel-concrete composite structures. This paper will review recent major innovations that have allowed for the promulgation of steel and steel-concrete composite solutions. The paper posits that the future of steel and composite structures lies in the intersection of the development of high performance steel (HPS) and high performance concrete (HPC) and in concert with design for manufacture (DfM) sustainability principles.



Fig. 1 High strength steel slenderness tests, (Huang et al, 2019)

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