

My Research Diary

KID: 20190101

Our research group at IIT Hyderabad focuses on the innovative use of structural steel in a sustainable manner to solve the global infrastructure need. In particular, my team is working on the development of affordable housing technology using light gage steel structures, geometric imperfection studies in cold-formed steel, structural design of cold-formed steel wall panels, CFRP retrofitting of steel structures, connections in cold-formed steel sections, behavior of high-strength steel sections, composite (steel-concrete) construction, cyclone-resistant structures, and analysis of parallel flange beam structural steel section.

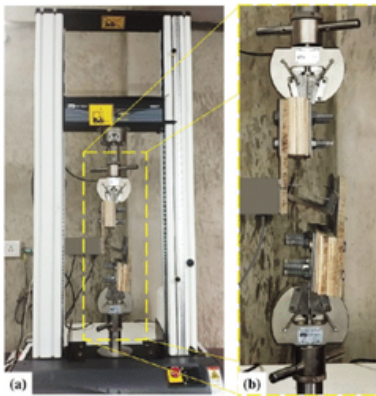


Figure Caption: Newly developed test setup to determine the stiffness of the sheathing boards in the wall panel

My team is mostly focused on real-life problems encountered by the construction industries, and the investigations are primarily experimentally based. Most of our recommendations and suggestions are adopted in the industry, specifically the wall panel design and retrofitting of steel structures. Research publications from my group were published in the top international journals such as ASCE Journal of Structural Engineering, Journal of Composites for Construction, thin-walled Structures and Journal of Constructional Steel Research and the outcomes were well acknowledged by the international codal committees and research community.

Our primary goal is to develop and derive design guidelines in the form of design codes (i.e. IS 800 and IS 801) for the construction of steel structures and enable sustainability in the infrastructure development.



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The Structural Steel Research Group of the Department of Civil Engineering is also organizing the Indian Structural Steel Conference (ISSC) between March 25-27, 2020, in association with ASCE India Section and Springer Publications.

It will be of interest to steel and aluminium structure designers and manufacturers, trade associations, design engineers, steel fabricators, architects, owners or developers of steel and aluminium structures, researchers, academics and postgraduate students. Please see the conference website for more information:

<https://www.issc2020.com/>

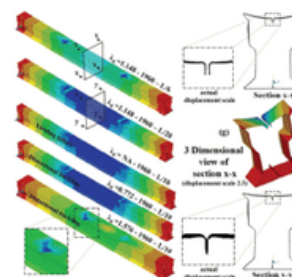


Figure Caption: Development of Finite Element Model for Cold-formed Steel Built-up Beams



Figure Caption: Development of Light weight flooring system