



Professor Akhil Upadhyay

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https://www.iitr.ac.in/departments/CE/pages/People+Faculty+Upadhyay_A_.html

Department of Civil Engineering
Indian Institute of Technology, Roorkee, India

Education:

1985 BE S.G.S.I.T.S., Indore, India
1987 ME S.G.S.I.T.S., Indore, India
1998 PhD IIT Matras

Research Interests:

Behavior and design of bridges; Behavior and design of laminated composite structures; Stability in steel and other thin walled structures; Genetic algorithm and ANN applications in structural engineering

Selected Publications:

Upadhyay, A. and Kalyanaraman, V., "Optimum Design of Fibre Composite Stiffened Panels using Genetic Algorithms" *Engineering Optimisation*, Vol.33, 2000, pp 201-220
Upadhyay, A. and Kalyanaraman, V., "Simplified Analysis of FRP Box-girders" *Composite Structures*, Vol. 59, 2003, pp 217-225
Upendra K. Mallela and Akhil Upadhyay, "Buckling of laminated composite stiffened panels subjected to in-plane shear – a parametric study", *Thin-Walled Structures*, Vol 44(3), 2006, pp 354-361
G. Mohan Ganesh, Akhil Upadhyay, and S.K. Kaushik, "Assessment of Horizontal Shear Strength Parameters of Profile Deck Slab by Artificial Neural Network", *Asian Journal of Civil Engineering*, Vol 7(4), 2006, pp 287-300
Mallela U.K., Chandak R. And Upadhyay A. 2006. *Laminated Composites for Structural Engineering – Perspective Application and Challenges*. International conference, Indian Institute of Technology Guwahati.
Rajeev Chandak, Akhil Upadhyay, Pradeep Bhargava, "Shear lag prediction in symmetrical laminated composite box beams using artificial neural network" *Structural Engineering and Mechanics*, vol.29, no.1, May 2008, pp 77-89
Hemendra Kumar Jain and Akhil Upadhyay, "Laminated composite stiffened panels: Applications and Behaviour", *Civil Engineering Conference Innovation Without Limit (CEC-09)*, September 18-19, 2009, NIT

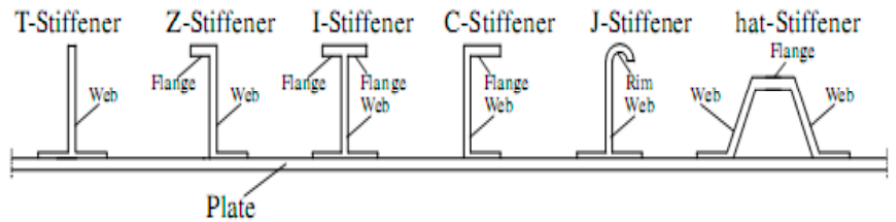


Fig.1.Example for stiffeners cross section

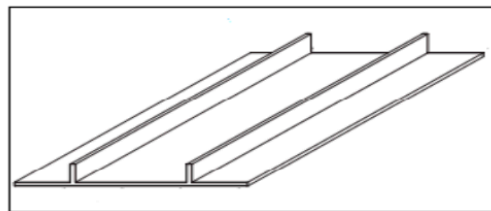


Fig.2.Composite blade stiffened panel (open type)

From: Hemendra Kumar Jain and Akhil Upadhyay, "Laminated composite stiffened panels: Applications and Behaviour", *Civil Engineering Conference Innovation Without Limit (CEC-09)*, September 18-19, 2009, NIT Hamirpur, pp 89-96

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Venkat Lute, Akhil Upadhyay and K.K. Singh “Computationally Efficient Analysis of Cable Stayed Bridge for GA-based Optimization” Engineering Applications of Artificial Intelligence vol. 22, June 2009, pp 750-758

M. Bhagwat, S. Sasmal, B. Novák, A. Upadhyay , "Dynamic performance evaluation of straight and curved cable-stayed bridges" Bridge Structures, Vol. 5, Nos. 2–3, June– September 2009, pp. 87–95

Uendra K. Mallela and Akhil Upadhyay, “Validity Of Simplified Analysis For The Stability Of Laminated Composite Stiffened Panels Subjected To In-Plane Shear” Structural Engineering and Mechanics, vol.32, no.4, July 2009, pp 583-586

Upadhyay, A. and Kalyanaraman, V., “Optimum design of FRP Box-girders” Structural Engineering and Mechanics, Vol. 35 No. 5, July30 2010, pp 539-554

Uendra K. Mallela, Akhil Upadhyay, “Buckling of laminated composite stiffened panels subjected to linearly varying in-plane edge loading” International Journal for Computational Methods in Engineering Science and Mechanics, 15(1), 2014, pp. 33-44

Uendra K. Mallela, Akhil Upadhyay, “Buckling load prediction of laminated composite stiffened panels subjected to in-plane shear using artificial neural networks” Thin-Walled Structures, 102 (May 2016), pp 158-164

Qazi Inaam and Akhil Upadhyay, “Behavior of corrugated steel I-girder webs subjected to patch loading: Parametric study”, Journal of Constructional Steel Research, Vol. 165, Article 105896, February 2020