



Dr. Shanmuganathan Gunalan

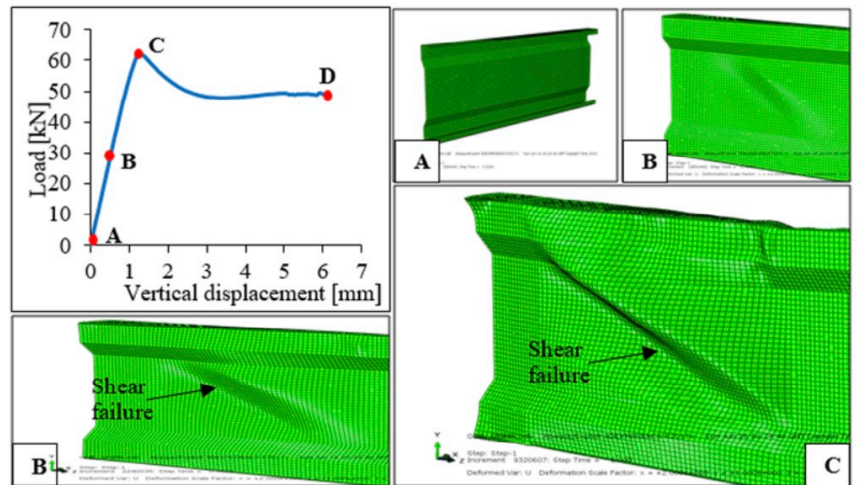


Fig. 3. Failure modes (deformation pattern) of Super-Sigma section subject to shear at different stages

From: Perampalam Gatheeshgar, Keerthan Poologanathan, Shanmuganathan Gunalan, Brabha Nagaratnam, Konstantinos Daniel Tsavdaridis and Jun Ye, “Structural behaviour of optimised cold-formed steel beams”, Steel Construction – Design and Research, September 2019

See:

<https://app.secure.griffith.edu.au/phonebook/phone-details.php?type=B&id=1724030>

<https://scholar.google.com/citations?user=0-b6nIwAAAAJ&hl=en>

<https://au.linkedin.com/in/shanmuganathan-gunalan-2304288>

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Queensland University of Technology (QUT), Brisbane, Australia

Autobiography:

I worked as a structural engineer before commencing my PhD on fire safety of cold-formed steel structures at Queensland University of Technology (QUT) in 2008. After completing my PhD in 2011, I worked as an associate lecturer and research fellow for 3 years at QUT. I joined Griffith University in 2014 to teach structural engineering courses within the School of Engineering and Built Environment. I am an active researcher in the area of facade engineering and aluminium, steel & timber structures. I have been working on a variety of structural and fire engineering research projects funded by ARC and industry. I aim to pursue research in aluminium, steel and timber structures to develop innovative and sustainable disaster resilient buildings and facades.

Selected Publications:

Shanmuganathan Gunalan and Mahen Mahendran, “Improved design rules for fixed ended cold-formed steel

columns subject to flexural-torsional buckling”, *Thin-Walled Structures*, Vol. 73, pp 1-17, December 2013

S. Gunalan, Y. Bandula Heva and M. Mahendran, “Cold-Formed Steel Columns Subject to Local Buckling at Elevated Temperatures”, *Steel Innovations Conference 2013*, Christchurch, New Zealand 21-22 February 2013

Shanmuganathan Gunalan, Prakash Kolarkar and Mahen Mahendran, “Experimental study of load bearing cold-formed steel wall systems under fire conditions”, *Thin-Walled Structures*, Vol. 65, pp 72-92, April 2013

Shanmuganathan Gunalan and Mahen Mahendran, “Development of improved fire design rules for cold-formed steel wall systems”, *Journal of Constructional Steel Research*, Vol. 88, pp 339-362, September 2013

Shanmuganathan Gunalan and Mahen Mahendran, “Review of current fire design rules for cold-formed steel wall systems”, *Journal of Fire Sciences*, Vol. 32, No. 1, pp 3-34, 2014

S. Gunalan, M. Mahendran, Fire performance of cold-formed steel wall panels and prediction of their fire resistance rating, *Fire Saf. J.*, 64 (2014), pp. 61-80

Shanmuganathan Gunalan, Yasintha Bandula Heva and Mahen Mahendran, “Flexural-torsional buckling behaviour and design of cold-formed steel compression members at elevated temperatures”, *Engineering Structures*, Vol. 79, pp 149-168, November 2014

Gunalan S and Mahendran M (2014) Experimental investigation of post-fire mechanical properties of cold-formed steels. *Thin-Walled Structures* 84: 241–254.

S. Gunalan and M. Mahendran, “Web crippling tests of cold-formed steel channels under two flange load cases”, *Journal of Constructional Steel Research*, Vol. 110, pp 1-15, July 2015

S. Gunalan, Y.B. Heva, M. Mahendran, Local buckling studies of cold-formed steel compression members at elevated temperatures, *J. Constr. Steel Res.*, 108 (2015), pp. 31-45

B. Janarthanan, M. Mahendran, S. Gunalan, Bearing capacity of cold-formed unlippped channels with restrained flanges under EOF and IOF load cases, *Steel Constr*, 8 (3) (2015), pp. 146-154

S. Gunalan, M. Mahendran, Experimental study of unlippped channel beams subject to web crippling under one flange load cases, *Adv Steel Constr*, 15 (2) (2019), pp. 165-172

B. Janarthanan, L. Sundararajah, M. Mahendran, P. Keerthan and S. Gunalan, “Web crippling behaviour and design of cold-formed steel sections”, *Thin-Walled Structures*, Vol. 140, pp 387-403, July 2019

B. Janarthanan, M. Mahendran, S. Gunalan, “Numerical modelling of web crippling failures in cold-formed steel unlippped channel sections”, *Journal of Constructional Steel Research*, Vol. 158, pp 486-501, July 2019

Madhusan Dissanayake, Keerthan Poologanathan, Shanmuganathan Gunalan, Konstantinos Daniel Tsavdaridis and Brabha Nagaratnam, “Finite Element Analyses of Cold-formed Stainless Steel Beams Subject to Shear”, *The 14th Nordic Steel Construction Conference*, Copenhagen, Denmark, September 18-20, 2019

Husam Alsanat, Shanmuganathan Gunalan, Hong Guan, Poologanathan Keerthan, John Bull, “Experimental study of aluminium lipped channel sections subjected to web crippling under two flange load cases”, *Thin-Walled Structures*, Vol. 141, pp 460-476, August 2019

Perampalam Gatheeshgar, Keerthan Poologanathan, Shanmuganathan Gunalan, Brabha Nagaratnam, Konstantinos Daniel Tsavdaridis and Jun Ye, “Structural behaviour of optimised cold-formed steel beams”, *Steel Construction – Design and Research*, September 2019

N. Degtyareva, P. Gatheeshgar, K. Poologanathan, S. Gunalan, M. Lawson and P. Sunday, “Combined bending and shear behaviour of slotted perforated steel channels: Numerical studies”, *Journal of Constructional Steel Research*, Vol. 161, pp 369-384, October 2019

Husam Alsanat, Shanmuganathan Gunalan, Poologanathan Keerthan, Hong Guan and Konstantinos D. Tsavdaridis, “Web crippling behaviour and design of aluminium lipped channel sections under two flange loading conditions”, Article 106265, *Thin-Walled Structures*, Vol. 144, November 2019

Husam Alsanat, Shanmuganathan Gunalan, Keerthan Poologanathan, Hong Guan and Konstantinos Daniel Tsavdaridis, “Numerical investigation of web crippling in fastened aluminium lipped channel sections under two-flange loading conditions”, *Structures*, Vol. 23, pp 351-365, February 2020

Husam Alsanat, Shanmuganathan Gunalan, Keerthan Poologanathan, Hong Guan and Charalampos Baniotopoulos, “Fastened Aluminum-Lipped Channel Sections Subjected to Web Crippling under Two-Flange Loading Conditions: Experimental Study”, *ASCE Journal of Structural Engineering*, Vol. 146, No. 4, April 2020