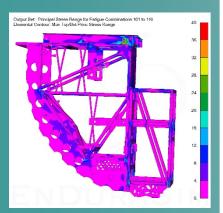
ASI seminar series - 2019









Vernon McKenzie

Finite Element Analysis of Steel Structures – Reducing Risk and Optimising Design

Finite Element Analysis (FEA) can be a useful tool to determine stress levels in structures and optimize design. Common challenges faced by engineers include: pressure to rely wholly on FEA results; which FEA results can be trusted for assessment; and comparing fatigue Standards details with FEA details in real structures.

This seminar provides an overview of the positives and negatives of FEA with particular emphasis on fatigue & weld design and is of specific value for structural, mechanical and forensic engineers.

Times

12.00pm for 12.30pm start to 5.00pm finish

Seminar Package

Seminar Notes (PDF) Light lunch on arrival Afternoon tea

Seminar Content

- When your FEA is responsible for deciding: "Will it work without us testing?"
- FEA stresses for fatigue: the good, the bad, the ugly.
- The value of test models to provide better information.
- Weld details: real world vs FEA vs Standards (e.g. AS 4100 Sec 11, EC 3, BS 7608).
- Solid vs Plate vs Beam models for assessment stress: "Should I model the weld?"
- Duty cycles and stress ranges: "What do I do without the fatigue software add-on?"
- Case studies from amongst mining, railway and industrial equipment. Wind fatigue analysis
 of Perth Stadium speaker frames.

Presenter

Vernon McKenzie - Vernon is the Managing Director with EnDuraSim

Vernon has 20 years hands-on experience in the application of FEA to real world engineering challenges. He has personally trained several hundreds of engineers in the practical application of FEA, and has conducted consulting projects - mainly associated with mining, transportation structures (planes, trains, automobiles, buses, ships, subs, trucks and tractors) and industrial equipment - on four continents.

Vernon has a First Class Honours Degree in Mechanical Engineering from the University of Technology, Sydney and a Graduate Certificate in Management Practice from the Australian Institute of Management.

Seminar Fee (incl GST)

\$375 ASI Member \$455 EA Member \$535 Non Member



Engineers attending this seminar may gain CPD points to meet Engineers Australia requirements.

EA Members who are not ASI members should email membership@steel.org.au with proof of membership to obtain the promotion code to access the EA Member reduced fee.

Location	Date	Venue
Brisbane	Monday 11 November	Brisbane Convention & Exhibition Centre, cnr of Merivale & Glenelg Streets, South Bank
Sydney	Tuesday 12 November	Urban Hotel, 194 Pacific Hwy, Greenwich
Melbourne	Wednesday 13 November	Pullman Melbourne on the Park, 192 Wellington Parade, Melbourne
Adelaide	Monday 18 November	Education Development Centre, 4 Milner Street, Hindmarsh
Perth	Tuesday 19 November	The Geographe Room, State Library, Francis Street, Perth

Register online at: https://www.steel.org.au/events-awards/events/