FEMPLY PRO

FEMPLY is a Composite Ply-Based Modelling and Post-processing tool fully integrated into Siemens' FEMAP Pre/Post-processor offering fast, efficient and simple definition of complex component layups, post-processing to advanced composite laminate and sandwich panel failure theorems and automated reporting of layups, plies and bill of materials.

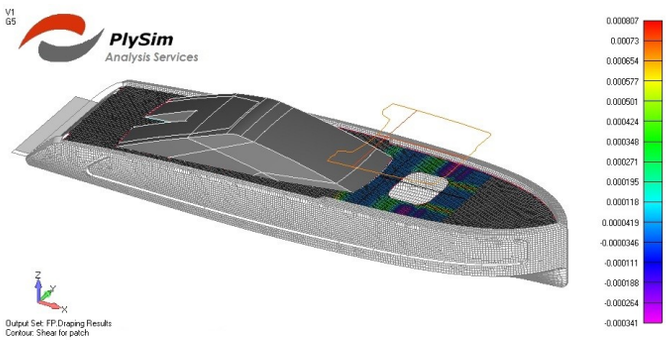
Developed by PlySim, a leading Composites Engineering Consultancy, FEMPLY is a versatile tool developed and used by Composite Engineers on real-world projects in a wide range of markets.

Perpetual Node-locked and Network Floating licenses are available.

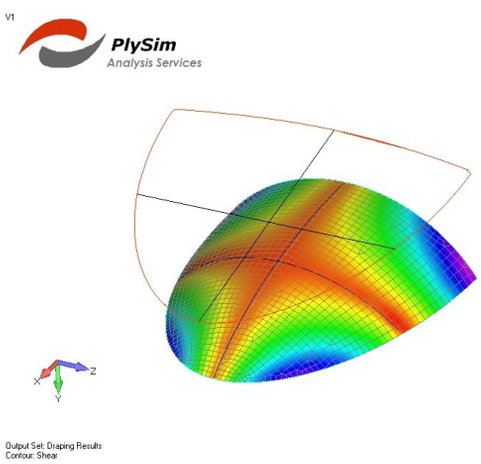
Features

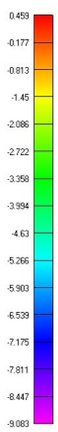
FEMPLY includes a large range of features to improve the Simplicity, Speed, Versatility and Reliability of Composite Pre and Post-processing:

- Simple, intuitive user interface.
- Edit multiple plies in one operation.
- Completely integrated into FEMAP. No exporting to external programs required.
- A single definition of Laminate Properties, Failure Theorem and Offsets can be applied all Composite Property sets.
- Geometry Independent.
- Automatically re-map existing plies onto a new mesh or after mesh refinement.
- Import Plies, Materials and Properties from other FEMPLY layup files.
- Ply definitions are unrestricted by interior holes etc.
- FEMPLY Layup Files can be easily read, modified or written by in-house programs.
- FEMPLY uses FEMAP's Global Ply functionality for easy post-processing.
- Import Global Plies from legacy models.



Ply Draping Analyses and Flat Ply Shape Export





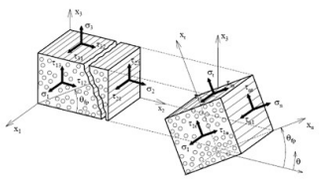
- Accurately account for fibre angle deviation during the manufacture process.
- Verify planned production processes.
- Reduce the need for modifications or redesign late in the manufacturing process.
- Directly extract 2d CAD ply shapes for use in ply booklets or cutting patterns.
- Enhance the accuracy and reproducibility of the component

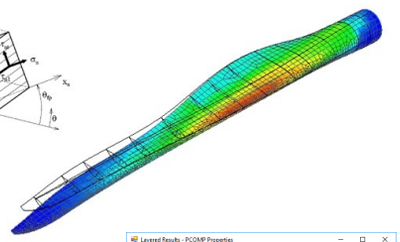
Visit www.Femply.com to find out more

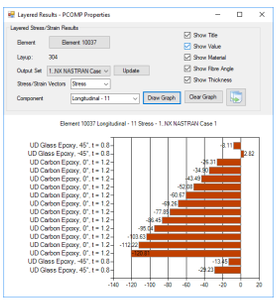
FEMPLY PRO

Advanced Failure Theorem Post-Processing

- Robust Post-Processing to Hill, Hoffman, Tsai-Wu, Max Stress, Max Strain, Puck, Cuntze, LaRC02 and User-Defined failure theorems.
- Inverse Reserve Factors.
- Output vectors by Layer, Global Ply and Maximum.
- Critical Ply and Fibre Angle output vectors to quickly and easily identify critical areas.
- Sandwich Stability Calculations for Skin Wrinkling, Shear Crimping and Honeycomb Dimpling.
- Failure Envelope Charting and Export.
- Layered Stress / Strain Visualisation Tools

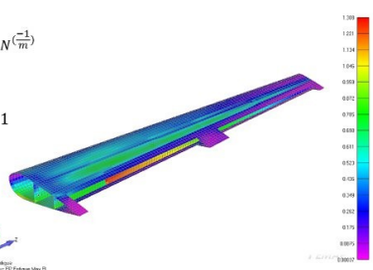






$$\frac{\sigma_{Fatigue}}{\sigma_{Ultinate}} = N^{\left(\frac{-1}{m}\right)}$$

$$\sum_{i=1}^{i=k} \frac{n_i}{N} = 1$$

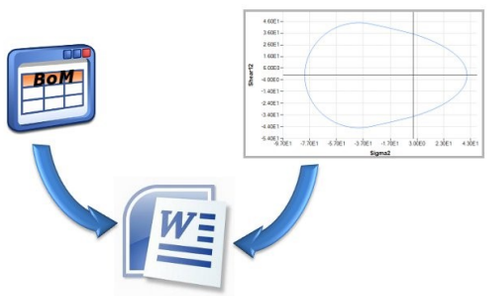


Fatigue Damage Summation and Failure Indices

- A Miners damage summation with calculation of linear fatigue failure indices.
- Critical Ply, Component and Fibre angle vectors with results by layer and Global Ply.

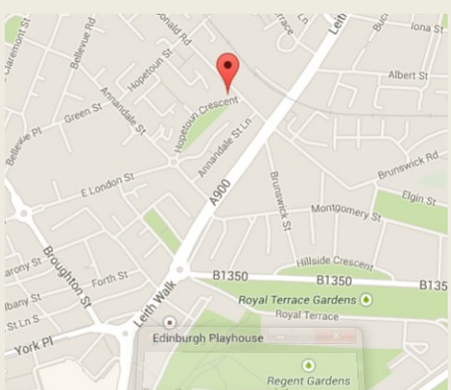
Laminate, Bill of Materials and Failure Calculation Reporting

- Automated Microsoft Word reporting of Failure Theorems, Failure Envelopes, Failure Indices and Critical Results
- Bill of Material, Layup, Ply and Material Summary Reports including layup and ply application region images.
- Sandwich Stability Reports including Failure Theorem summary, Failure Envelopes, Failure Indices and Critical Results.



Contact Us

If you have any comments, enquiries or suggestions, we'd love to hear from you. You can contact us using the details below or through the product or company website.



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