

Fibre-dominated strength of multidirectional laminates

Yentl Swolfs



KU LEUVEN

Federico Paris



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Workshop series

“How do we define and measure strength of a composite?” – 09/10/2020

www.bristol.ac.uk/engineering/news/2020/composite-strength-workshop.html

“Measuring UD tensile strength and the factors affecting it” – 23/03/2021

www.bristol.ac.uk/engineering/news/2021/tensile-strength-workshop.html

“Measuring UD compression strength and the factors affecting it” – 05/10/2021

www.bristol.ac.uk/engineering/news/2021/ud-compression-strength-workshop.html

“Measuring shear strength and the factors affecting it” – 07/03/2022

www.bristol.ac.uk/engineering/news/2022/fourth-international-workshop-in-the-measuring-strength-series.html

“Measuring transverse strength and the factors affecting it” – 20/10/2022

www.bristol.ac.uk/engineering/news/2022/fifth-international-workshop-in-the-measuring-strength-series.html

Objectives

Raise awareness of difficulties

Identify best practices

Identify next steps

Agenda (UK time)

14:00h – Meeting introduction – Yentl Swolfs

14:05h – Topic presentation - Federico Paris, Michael Wisnom, Yentl Swolfs

14:20h – 5-minute presentations

15:20h – Panel member questions and comments (live)

15:40h – Break

15:50h – Open discussion (Q&A or raising hands)

16:40h – Conclusions, suggestions for next steps and topics for next workshops

17.00h – End of meeting

5-minute presentations

Title	Presenter
Experimental observations on the effect of the 90 degree ply block thickness on the strength of 0/90 laminates	Elena Correa
The effect of transverse cracking on longitudinal tensile strength	Yentl Swolfs
Recent advances in UD failure simulation and its application to laminate strength	Tomonaga Okabe
Quasi-isotropic laminates, fiber failure or delamination?	Christian Hochard
Predicting unnotched strength of QI laminates using UD strength and size effect laws	Xiaodong Xu
The influence of edge delamination on coupon strength tests	Richard Butler
Simulating sub-critical transverse cracking and delamination in blocked un-notched specimens	Silvestre Pinho
Tensile strength of thin-ply quasi-isotropic laminates: is controlled by fiber failure or by other mechanisms?	Joel Cugnoni
On the use of crossply and quasi-isotropic laminates to measure the unidirectional compression strength of composites	Dan Adams
Experimental and numerical study on the compressive failure of different carbon/thermoplastic multi-layered laminates	Frédéric Laurin
Effect of off-axis ply orientation on 0-fibre microbuckling	Costas Soutis

Ground rules

Session is being recorded

Slides will be shared afterwards

During discussions

- Write questions in Q&A or raise hand (at anytime)

- (optional) Upvote questions

- No camera for audience

- Use chat for general comments and saying hi

Participants list not visible