



Press Release – March 2012

JEC EUROPE - COMPOSITES SHOW & CONFERENCES 27-29 March 2012

Paris- Porte de Versailles

Hall 1 - Stand M84

**THE CELC TECHNICAL SECTION PRESENTS
THE FIRST SCIENTIFIC PUBLICATION ON FLAX AND HEMP REINFORCEMENTS:
“FLAX AND HEMP FIBRES: A NATURAL SOLUTION FOR THE COMPOSITE INDUSTRY”
CO-PUBLISHED WITH THE JEC GROUP**

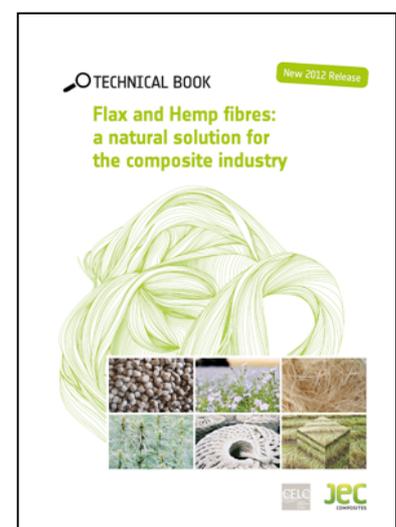
The industrial sectors that use non-renewable fibres have undertaken an eco-design initiative. Having the structure to meet this new industrial need, **the CELC Technical Section** collaborated with its **European scientific committee CSE** to produce the first scientific work on natural fibre composite solutions, **“Flax and Hemp fibres: a natural solution for the composite industry”**. The book is **co-published with JEC Group**, a leader in the composite sector, and will be unveiled at the JEC Composite Show & Conferences (27-29 March). This new technical publication is the result of several years of research by the CELC’s European Scientific Committee - CSE, backed up by the organised production/distribution chain and increasingly productive R&D efforts. It promotes the choice of flax and hemp fibres within the framework of **an effective eco-design initiative** and calls attention to the importance of an **open-innovation approach** to meet the needs of the industry over the medium and long term.

“FLAX AND HEMP FIBRES: A NATURAL SOLUTION FOR THE COMPOSITE INDUSTRY”, A LONG-AWAITED PUBLICATION FOR THE WHOLE VALUE CHAIN

This new English-language reference work (200 pages), studies the mechanical and specific properties of the flax and hemp used in polymer reinforcement and assesses their major environmental advantages. The objective: help advance knowledge on fibres and preforms (UDs, fabrics, non crimp fabrics, mats, prepregs, compounds, etc.) and win over new industrial segments.

The studies are put into perspective with analyses of converting and manufacturing processes. Therefore, the publication is dedicated not only to R&D engineers who use fibres, but also to the entire composite industrial chain. It contributes to provide a detailed review and lines of thinking on:

- the state of the art on natural flax and hemp fibres (identification of the complex structures);
- analysis of the mechanical performance of natural fibre reinforced composite materials (e.g. variation of specific properties as a function of the fibre processing method used, controlling biodegradability);



- assessment of the suitability of the different types of flax and hemp reinforcement for processing as a function of the specific processes used (UDs, fabrics, non crimp fabrics, mats, prepregs, compounds, etc.);
- organizing a production/distribution chain to meet industry needs over the medium and long term;
- developing industrial technologies for converting plant fibres into preforms that meet the requirements of the composite industry;
- the scope of effective uses and the prospects for potential industrial applications.

“FLAX AND HEMP FIBRES: A NATURAL SOLUTION FOR THE COMPOSITE INDUSTRY”

By the CELC European scientific committee CSE’s ten experts, presided over by Ignaas Verpoest

Editorials by CELC Secretary General Marie-Emmanuelle Belzung, CELC Technical Section Director Benoît Savourat, JEC Group President & CEO Frédérique Mutel, and ADEME Director François Loos

- 1 A general introduction to composites, highlighting the advantages of flax & hemp composites – Ignaas Verpoest
2. Reinforcements: fibres – Jörg Müssig and Mark Hugues
3. Architecture of textile reinforcements and properties of composites – Joris Baets & Stepan V. Lomov
4. Matrix polymers – Christophe Baley & Peter Davies
5. Semi-products with flax and hemp fibres – Joris Baets
6. Production techniques for natural fibre polymer composites – Gerhard Ziegmann & Ahmed Elsabbagh
7. Properties of flax & hemp composites – Hans Lilholt & Bo Madsen
8. Flax & hemp composite applications – CELC Technical Section & Moussa Gomina
9. Eco-design, life cycle analysis (LCA) and recycling – Christophe Baley & Antoine Le Duigou
10. Availability and accessibility of flax and hemp for use as materials
11. Glossary of flax and hemp composites – Joris Van Acker

Appendices: Other technical applications for flax and hemp fibres + Flax and hemp for added environmental value

For sale in the JEC Europe Publications Store (stand M15) at a 20% “launch” discount, then available at JEC’s online store on March 29th. (<http://www.jeccomposites.com/shop/all>) at the retail price of €80.57 exclusive of tax.

**TECHNICAL SALE PRESENTATION
TUESDAY 27 MARCH 2012 AT 10:00 AM – STAND X18**

**IGNAAS VERPOEST, PROF. DEPARTMENT METALLURGY AND MATERIALS ENGINEERING,
KU LEUVEN, BELGIUM**

AND PRESIDENT OF THE CELC EUROPEAN SCIENTIFIC COMMITTEE CSE

WILL GIVE A CONFERENCE ON THE MATERIAL IN THE PUBLICATION



About the CELC Technical Section

Created in 2005, the CELC Technical Section is dedicated to technical composite applications in eco-building and home furnishing.

Its mission is to:

- serve as an interface to match the needs of the multi-segment industry with the chain's industrialisation capacity for technical flax and hemp applications;
- organise a European skills network that includes companies, universities and research centres;
- foster research through participation in European programmes;
- participate in European events and in international tradefairs.

Since November 2009, the Technical Section has the support of the European scientific committee CSE, which serves both the players in the flax and hemp value chain and the manufacturers who use the fibres.

Ten research experts pool their knowledge of analytical and characterisation techniques to:

- establish an inventory of existing scientific resources and techniques,
- examine possibilities for development and new research in correlation with the industry's strategy;
- give priority to open-ended innovation and facilitate shifts of technical skills.



Of service to companies: a dedicated CELC project manager and a technical and scientific benchmark (technical@mastersoflinen.com).

ABOUT CELC

The European flax and hemp confederation CELC is the only European agro-industrial organisation that encompasses all production and processing stages for flax and hemp. The CELC is the preferred intermediary for 10,000 European companies, which has allowed it to acquire technical skills in fibres at all stages, from plant to end product.

Created in 1951, the CELC is dedicated to research, current analysis, collaborating with the industry, and strategic direction.

The Linen Dream Lab is a showroom dedicated to textile and technical innovation for flax & hemp fibres.

Services: support for creation; aid in sourcing; materials, yarns and fabrics libraries.

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About JEC GROUP

JEC is the largest composites industry organization in Europe and in the world with a network of 250,000 professionals. JEC represents, promotes and expands composites markets by providing global or local networking and information services. Through knowledge and networking, the JEC experts offer a comprehensive service package: the JEC publications – including strategic studies, technical books and the JEC Composites Magazine – the JEC Composites weekly international e-letter and the French e-letter JEC Info Composites. JEC also organizes JEC Europe Show in Paris – world and European leader, strongly supported by the industry and four times bigger than any other composites exhibition – JEC Asia in Singapore and JEC Americas in Boston, the www.jecomposites.com website, the JEC Composites Conferences, Forums and Workshops (including I.C.S., the Innovative Composites Summit) in Paris, Singapore and Boston, and the JEC Innovation Awards program (Europe, Asia, America, India and China). The composite industry employs 550,000 professionals worldwide and generates 72 billion euros worth of business.

The visual for the book is available upon request – just contact the press service

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