CONFERECE PROGRAMME
Tuesday 2 October 2012 – WORKSHOP DAY

08:30 Registration and refreshments
09.00 – 12.30
   Workshop 1 – Retaining Mechanical Properties in Recycled Carbon Fibres
   Dr Stephen Pickering, THE UNIVERSITY OF NOTTINGHAM, UK
   Plus selected guest speakers.

   Refreshments to be served from 10:30-11:00

13:30 Registration and refreshments
14.00 – 17.30
   Workshop 2 – So You Want To Build A Carbon Fibre Production Line?
   John Davidson, CARBON FIBRE TECHNOLOGIES INTERNATIONAL, UK
   Plus selected guest speakers.

   Refreshments to be served at 15:50-16:10
Wednesday 3 October 2012 – CONFERENCE DAY 1

08.00 Registration and refreshments

09.00 Opening remarks from the CoChairs
  John Davidson, President, CARBON FIBRE TECHNOLOGIES INTERNATIONAL, UK
  Dan Pichler, Director, HCC, Russia

Fundamental Drivers for Carbon Fibre

Opening Keynote
09.10 The Future of Carbon Fibre to 2016
  - Key growth and decline areas
  - Challenges for composites producers under a changing economy and fragile demand
  - How can CFRP compete on a level playing field to metal
  Edward G Carson, Consultant, SMITHERS APEX, USA

End User Keynote
10.00 Carbon fibre’s role in driving automotive environmental performance
  - The future of transport - standards of the tomorrow in automotive design and production
  - Drivers for the drivetrain - ‘engines’ of the future and impact on lightweight vehicle design
  - Balancing materials – how must carbon fibre compete in the metals’ playground
  - Life cycle challenges - is carbon fibre green enough for next generation vehicles?
  Dr Armin Plath, Head of Materials Research and Manufacturing Processes Group Research, VOLKSWAGEN AG, Germany

10.50 Morning refreshments

11.30 Precursor production as a key process for high performance, low cost carbon fibers
  - Review and technical evalution of the carbon fibre production process
  - Controlling final properties via the polymer matrix and spinning of the precursor
  - Analysis of cost distribution in fibre production and options for reduction
  - The economic and technical evaluations are combined
  Christian Wills, Man-made Fibre Technology, AACHEN UNIVERSITY, Germany

Seeking New Opportunities in Carbon Fibre

12.00 Spinning wooll to carbon fibre
  - Thermoplastic polymers and carbonisation
  - The route to high temperature carbonisation
  - Properties and applications of acrylonitrile fibres
  - Exploring options for carbon fibre precursors
  Neil Barker, CTO, BLUESTAR FIBRES, UK
12.30 New ventures in carbon fibre production - connecting the downstream markets
- Carbon fibre potential - why Dow sees carbon fibre composites as a sound investment
- Synergies for a global chemical company, connecting with the downstream markets
- Key challenges in integrating carbon fibre into a global plastics portfolio
- Opportunities in the automotive sector - developing materials for next generation lightweight vehicles
Dr Marco Barsacchi, Board Member, DOWAKSA ADVANCED COMPOSITES, Turkey

13.00 Lunch will be served for all speakers and delegates

14.00 Opportunities in carbon fibre composites in Russia
- Current capabilities and production capacity in Russia
- Opportunities for the future - why invest in carbon fibre composites
- Key target markets and growth potential
Sergey Pavlov, Marketing & PR Director, HOLDING COMPANY COMPOSITE, Russia

From Fibres to Composites

14.30 Optimisation of carbon multiaxials for high volume component production
- The converter’s target #1: maximum utilisation of fibre property
- The converter’s target #2: optimal processability
- High volume component production: shifting the goalposts
Tom James, Head of R&D, FORMAX, UK

15.00 Challenges and novel developments in woven carbon fibres
- The weaving process - specific challenges for weaving carbon fibres
- Established technologies and barriers to development
- Impact of upstream changes in fibre production
- The future of weaving
Chris McHugh, Technical Manager, SIGMATEX, UK

15.30 Afternoon refreshments

16.10 Evaluating thermosetting vs thermoplastic prepregs and the role of resin matrix technologies
- Comparison of technical properties of thermoplastic and thermoset prepregs
- Comparing production processes
- Comparing achievable cost structures
- Advantages and disadvantages of both products
Dr Jan Verdenhalven, Managing Director, CARBCONSULT, Germany

16.40 Back to basics - review of fundamental chemistry of carbon fibres, filaments and nanotubes
- Carbon for strength - why this element is the key to lightweight structures
- Fundamental aspects of catalytic growth of carbon nanofibers and nanotubes: nucleation and morphology control
Dr Avelik Harutyunyan, Chief Scientist, HONDA RESEARCH INSTITUTE, USA

Discussion Point
17.10 Where is it all going then? Future perspectives on global carbon fibre production
Dan Pichler, Director, HCC, Russia

17.30 Networking drinks reception
Thursday 3 October 2012 – CONFERENCE DAY 2

08.30  Registration and refreshments

09.00  Opening remarks from the CoChairs
John Davidson, President, CARBON FIBRE TECHNOLOGIES INTERNATIONAL
Edward G Carson, Consultant, SMITHERS APEX, USA

Supply Chain and Life Cycle Dynamics for Carbon Fibre Composites

09.30  Innovative composite technology for automotive application
- Drivers for increased implementation of lightweight structures
- Challenges to the introduction of CFRP to mass production vehicles
- Development of CFRP body for the LEXUS LFA
- Toyota vision of composites development for future vehicles
Julien Tachon, Senior Engineer, Organic Material, Materials & Research, Research and Development, TOYOTA MOTOR EUROPE NV/SA, Belgium

10.00  Opportunities and challenges in making high volume automotive composites a reality
- Using composites as part of mixed material assembly
- Are composites an innovation barrier or enhancer?
- What answers are be found in Life-Cycle Assessment and Life-Cycle Costing
- Key elements to transition to high volume composite use in the automotive sector
Prof Jan-Anders E Månson, ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL), Switzerland

10.30  Morning refreshments

11.10  Life cycle scenarios for carbon fibre and carbon fibre reinforced composites
- Review of the life cycle assessment of CF(RP) production
- The impact of the use phase on the life cycle environmental impact of CFRP
- Environmental impact of the end-of-life options
- The entire life cycle
- Case study for CFRP versus steel/aluminium of a car body in white & discussion
Prof Karel van Acker, KU LEUVEN, Netherlands

Optimisation of Manufacturing Efficiencies and the Testing Environment

11.40  Carbon fibre use in the wind energy sector - market forecasts and novel approaches to composite manufacture
- Impact of the economic situation on new wind energy projects
- Trends in blade manufacture - use of carbon fibre composites in blade construction
- Gamesa approach to automated blade construction
- Plans for the future
Enrique Garcia, Head of Blades Department, GAMESA, Spain
12.10  Lunch will be served for all speakers and delegates

13.30  Presentation TBC

14.00  Progress in the automation of carbon fibre composites manufacturing
- Key goals in the automation of carbon fibre composites manufacturing
- Recent innovations in automation by key end use industry
- Major challenges for the future
Andrew Mafeid, Managing Director, CONNECTRA GLOBAL, Sweden

14.30  Afternoon refreshments

15.10  Mechanical testing of composites
- Fibres through laminates to components
- Laminate testing and test types
- Environmental effects (temperature, humidity, damage tolerance, fatigue)
Dr Daniel Bailey, Product and Market Manager, INSTRON, UK

15.40  Closing remarks from the CoChairs

15.50  Close of conference
SPEAKER BIOGRAPHIES & PHOTOS
Edward G Carson

Consultant, SMITHERS APEX, USA

Mr. Edward Carson is the owner and Chief Executive Officer of Growth Management and Constructive Changes LLC (GMC2). He is an industry expert involved in Pre-Award and Post-Award contractual risk analysis & growth strategies, covering some 3½ decades of aerospace and defense with The Boeing Company and HITCO Carbon Composites, Inc. Significant areas of expertise cover extensive: managerial and fact finding & negotiating experience, Mergers & Acquisitions support, Proposal Management and pre-award risk assessments, post-award Change Management transactions and resolution, Supplier Management including non-performance remedies, and manufacturing producibility risk assessments involving composite manufacturing especially automated solutions.


Edward is a Colonel, U.S. Army Retired. He served 28 years in the active and reserve components of the U.S. Army. He was commissioned as a 2LT Infantry in June 1970 from the University of Washington’s Army R.O.T.C. program. He also was trained and served in the Transportation Corps and Adjutant General Corps. He was a Battalion Commander who performed duties in Korea during military exercises as a Reserve Officer. Colonel Carson’s last military Reserve foreign assignment was for the U.S. Army Japan Headquarters serving in two annual military exercises as the G1.