LOCATION: MÉGACITÉ - EXPO & CONFERENCE CENTER, AMIENS (1 HOUR NORTH OF PARIS)
DATA: Tuesday 15 – Thursday 17 September 2015
WWW.SAMPE-EUROPE.ORG
### PRELIMINARY PROGRAMME

#### Tuesday 15 September
- 09.00  Tutorial Thermoplastic Composites in Aerospace
- 12.00  Lunch
- 13.00  Tutorial Automotive Market Composites Technology
- 17.00  Pre-registration conference
- 18.30  Welcome reception

#### Wednesday 16 September
- 08.00  Registration
- 09.00  Plenary sessions
- 10.25  Coffee break
- 11.00  3 Parallel Sessions, 5-6 slots each
- 13.00  Lunch
- 14.00  3 Parallel Sessions, 4-5 slots each
- 15.40  Tea break
- 16.00  Transfer to Stelia Mâeulte
- 16.30  Plant visit Stelia Mâeulte & IndustriLab
- 19.00  Transfer to dinner location
- 20.00  Conference dinner

#### Thursday 17 September
- 08.00  Registration
- 09.00  3 Parallel Sessions, 4 slots each
- 10.40  Coffee break
- 11.10  3 Parallel Sessions, 4-5 slots each
- 12.40  Lunch
- 14.00  3 Parallel Sessions, 3 slots each
- 15.15  Tea break
- 15.45  3 Parallel Sessions, 3 slots each
- 17.00  Happy Hour & Farewell

#### Additional
**Students Conference & Tutorials**
Location: IBIS Amiens Cathedrale

**30th Students Conference Amiens**
Sunday 13 -Tuesday 15 September

**Pre-Conference Tutorial Program given by:**
- Arnt Offringa, Fokker Aerostructures (NL)
- Scott Beckwith, BTG Composites Inc. (USA)

At the **Stelia Plant** the production and assemblee of both aluminium and composite parts for fuselage sections and A350 cockpits will be shown. A round tour in this 28.000 m2 production hall with 7 stops for instruction will give you a complete overview.

**IndustriLab** the new R&D Center opposite the Stelia plant in Mâeulte is an absolute exciting experience. Virtual Reality Rooms, a Trainingcentre and Robotics for future production are the main topics to be shown.
Speaker: Claude Gewerc - President du C.R. Picardie
Stelia Méaulte actively contributes to the success of all the Airbus programmes.

The 1500 employees are specialised in the production of nose sections for the whole Airbus family (from A318 to A380, also including A400M and A350XWB)

That is why this facility has set up breakthrough technologies: 5-axis high-speed milling with automated supply, automatic riveting for complex sub-assemblies, assembly assistance with LASER measure and drilling robots.

On top of that, Méaulte has developed flexible workshops for the sub-assemblies automatic riveting, the nose sections assembly and the fuselage lower shells assembly.

This new way of producing aircraft work packages strengthens the industrial capability of the facility and makes it easier to industrialise and manufacture new programmes.

A new composites unit produces composite work packages of the A350 XWB. Thus Stelia offers the best of metals and composites technologies to its customers.
PRE-CONFERENCE TUTORIAL
“Thermoplastic Composites in Aerospace: Materials, Processes, Applications and Developments”

PRESENTER – Arnt Offringa, Director R&D, Fokker Aerostructures

ABSTRACT – This tutorial on thermoplastic composites focuses on thermoplastic materials, processes and applications for the aerospace market. After an introduction on trends and the need for low weight structures, an overview of thermoplastic polymer types and different forms of thermoplastic composites is given. The reasoning behind thermoplastics is then explained, followed by a number of processing techniques and a note on repair. In the second part of the tutorial, successful aerospace applications are presented, followed by repair, current developments and an outlook towards the future. The tutorial concludes with a note on thermoplastics in automotive.

BIO – Arnt Offringa, Director R&D, Fokker Aerostructures
Arnt studied aerospace engineering at the University of Delft. He started his career in 1985 as a design engineer at Fokker Aircraft. In 1989 he joined Fokker Special Products and started a market oriented thermoplastics R&D effort. In 1991 an R&D department was created and in 1996 he became manager Engineering. Since 2003 he is Director R&D of Fokker Aerostructures.

- Personal introduction
- The need for lightweight solutions in aerospace
- What are thermoplastics and why choose them?
- High performance thermoplastic matrices
- Continuous fiber reinforced thermoplastic composite material forms
- Overview of processing technologies
  - Thermofolding
  - Press-forming
  - Consolidation
  - Welding
  - Co-consolidation, e.g. example of a butt-joint stiffening concept
- Successful aerospace applications:
  - A stepping-stone approach
  - Cargo hold cover
  - Floor panels
  - Non-aerospace spin-offs
  - Ribs and other press-formed parts
  - Ice-protection plates
  - Wing leading edges
  - Lessons learned
  - Engine inlet linings
  - Rudders and elevators
  - Wing access panels
  - Helicopter horizontal tail
- Repair
- Current developments
  - Large primary structures (the TAPAS projects):
    - Technology development for large structures
    - Demonstrator products:
      - Horizontal tail
      - Fuselage panels
  - A view towards the future, other opportunities
- A note on automotive
- Conclusion
- Factors for successful R&D
PRE-CONFERENCE TUTORIAL
“Automotive Market Composites Technology: Materials, Approach, Processing and Applications”

PRESENTER – Dr. Scott W. Beckwith, SAMPE Global Technical Director and BTG Composites Inc. President

ABSTRACT – Today more than ever, the automotive market and manufacturers are being pressured to develop lighter weight vehicles to meet fuel economy and recycling aspects. Composites are on the verge of providing much of the necessary technology in terms of lightweight materials in order to meet many governmental standards now being imposed.

The variety of composite materials available spans both the thermoset and thermoplastic resin systems available for many years in the aerospace market applications arena. However, the production volumes and the cycle times for producing automotive composites structural parts is vastly different.

Short cycle times, different requirements regarding crashworthiness, joining, painting, repairing vs. after-market parts replacement, and many other aspects (design methods, certification, etc.) are only a few of the differences.

The intent of this tutorial is to present an overview of the materials, the differences in approach, the processes being looked at currently, and, the various applications.

BIO – SAMPE Global Technical Director, and, President of BTG Composites Inc.
Dr. Beckwith has worked in the composites industry for the past 45 years in various design, manufacturing and marketing positions within both the aerospace and commercial markets. He is a SAMPE Fellow and an SME Jud Hall Awardee. He has a background in composites design and analysis, testing and inspection, manufacturing, carbon fibre technologies and failure analysis with Hercules Aerospace, Structures and Carbon Fibers (now Orbital-ATK and Hexcel). With over 550 technical publications and presentations, he frequently conducts composites tutorials, seminars and workshops. He has a technical background in carbon fibre materials, filament winding and fibre placement technology, and liquid moulding/resin infusion manufacturing technologies. He is also the SAMPE Journal Technical Editor.
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