



## PROGRAMME

### Adhesive Bonding in the Vehicle Industry

Tuesday, October 5th 2010

Faculty Club, Groot Begijnhof 14, 3000 Leuven, Belgium

- 09.00h**      **Reception and coffee**
- 09.30h**      **An overview on structural adhesive bonding: highlights & comparison to other joining methods**  
Pol Coudeville, Group Leader, KHBO (Belgium)
- This presentation will provide a comparison between adhesive bonding and traditional joining techniques, an overview of the different types of adhesives and tapes together with their typical applications. Furthermore, recommendations for good practical use of structural adhesives in the vehicle industry will be discussed.*
- 09.50h**      **Flanders' DRIVE Research Project "A roadmap to Adhesive Bonding"**  
Paola Campestrini, Project Manager Lightweight Materials, Flanders' DRIVE (Belgium)
- Together with 9 industrial partners, Flanders' DRIVE has started a collective research project for a roadmap to adhesive bonding. Goal is to develop guidelines for the companies: the right mechanisms of choice and validation methods in a structured approach, enabling companies to gain knowledge and trust in adhesive bonding so they can apply it reliably and cost efficiently. The validation of the roadmap will be based on specific applications provided by the partners.*
- 10.20h**      **A new process for adhesive - a challenge for a team-work**  
Harry Keller, Technical Expert Cold Joining Techniques, Ford Research & Advanced Engineering Europe (Germany)
- The introduction of a new application of adhesive bonding in the production of a passenger car requires a multidisciplinary approach. Starting from product development, involvement is needed throughout the enterprise and the supply chain. This presentation will comment on how a new process for an adhesive challenges team-work and a multidisciplinary approach.*
- 10.50h**      **Break**
- 11.20h**      **Innovative lightweight engineering concepts for the frontend structure**  
Stefan Szabo, Entwicklung/Angewandte Forschung, Kirchhoff Automotive (Germany)

*Continuous progress in vehicle engineering inevitably means that designers are faced with increasingly complex tasks. Technological innovations are therefore needed to offer solutions. Kirchoff Automotive has hereby developed a new hybrid concept for frontend structures with an innovative bonding technology between ecoated metal and low surface energy polypropylene. The concept was developed as part of the new frontend structure for the BMW 5-, 6- and 7-series.*

**12.00h Adhesive Bonding in an automated production environment**

**Marc Schaerlaekens, Chemical Engineer, D&M PSS (Belgium)**

*In car speakers, adhesives play a crucial role in performance, quality and durability. In a mass production environment, the production process has to be very stable and controlled in order to reach the desired levels of quality. This lecture will provide an overview on the validation methodology for car speakers, and how process and quality control is carried out.*

**12.30h Structural Adhesive Bonding: Drivers – Risks – Developments**

**Suzan de Haas, Material & Process Specialist, DAF Trucks (The Netherlands)**

*This lecture will present the vision of DAF Trucks regarding structural adhesive bonding: What are the drivers of the OEM to use structural adhesive bonding? Is the use of adhesives increasing? What are the main risks? How to control these risks? What does the development process of the adhesive joint look like?*

**13.00h Lunch**

**14.00h Development approach for adhesives in space structures**

**Els Lemmens, Structural Engineer, Qinetiq Space (Belgium)**

*Selecting adhesives for structural joints in space structures is not an obvious choice. The thermal (in orbit) and mechanical (during launch) loading is intense, whereas reliability demands are enormous. This presentation will elaborate on how the development of adhesive joints for space structures is carried out. Which design criteria are used, how to validate the adhesive joint against the performance and reliability specifications.*

**14.30h Surface aspects and their role in adhesion**

**Jan Wielant, R&D Engineer Surfaces, OCAS (Belgium)**

*A structural adhesive joint is as strong as the weakest link in the chain. Therefore, it is important to also incorporate surface aspects and their role in adhesion when evaluating or developing an adhesive joint. This lecture will discuss the different kind of surface properties and their link to the performance of the adhesive joint.*

**15.00h Quality assurance together with health & safety aspects, in adhesive joining technology**

**Ola Albinsson, Group manager Multi Material, Swerea-IVF (Sweden)**

*Quality assurance and health & safety regarding adhesive bonding are important challenges. This presentation includes an overview of different techniques and methods regarding quality assurance and health & safety, process control and non destructive testing of the adhesive joint. Furthermore, quality assurance of hybrid joints (resistance spot welding and rivets together with adhesives) will be discussed. How to work environmentally safe with adhesives and how this can have a positive effect on the quality of the adhesive joint.*

**15.20h Break**

**15.50h**

**Future developments in Adhesive Bonding**

**Manfred Peschka, Head of Adhesive Bonding Technology, Fraunhofer IFAM (Germany)**

*Under the constant drive for lightweight and cost-efficient design, the technology and application areas for structural adhesive bonding are evolving rapidly. This can be witnessed by the numerous research projects in which adhesive bonding plays an important role. This lecture will throw a glance at topics of current (European) research projects regarding adhesive bonding, how adhesive bonding will evolve in the next 5-10 years and which challenges have to be overcome.*

**16.20h**

**Panel Conversation**

**17.00h**

**Conclusions**

**17.15h**

**Network drink**