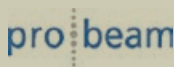


International Conference on
Applied Production Technology
2007

APT'07

sponsored by



organised by



Bremen

17 - 19 September 2007

Conference Chair:

Prof. Frank Vollertsen, Bremen, Germany (Chair APT '07)

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Dear Colleagues,

Industrial production in times of world-wide competition faces challenging demands in view of quality as well as of cost. Consequently, production engineering research focuses on improving both production technologies as well as production systems. However, to promote the successful industrial application of latest developments, a forum for discussion and dissemination is required. Consequently, The Bremen Production Days have been installed at the University of Bremen. The idea behind The Bremen Production Days is to combine a conference which is focused on basic research with a conference focused on an application field.

In 2007, one of the conferences featured in the framework of The Bremen Production is the APT'07 (Applied Production Technology), dealing with the wide area of recent advances concerning production aspects for aircraft structures.

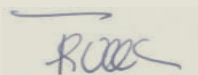
Aside from product safety and reliability, time-to-market and delivery reliability are of crucial importance in today's aircraft industries. Consequently, with increasing complexity of aircraft structures, there is a need for efficient production processes guaranteeing for highest product quality.

The APT'07 with nearly 40 presentations in 6 sessions demonstrates the international as well as the local interest in the dynamic development of this field of production engineering.

I would like to thank all members of the Conference and the Industrial Committee for their support in attracting contributions. Moreover, I would like to thank all colleagues who are acting as session chairs or presenters as well as all those many who have contributed to APT'07 "behind the curtain".

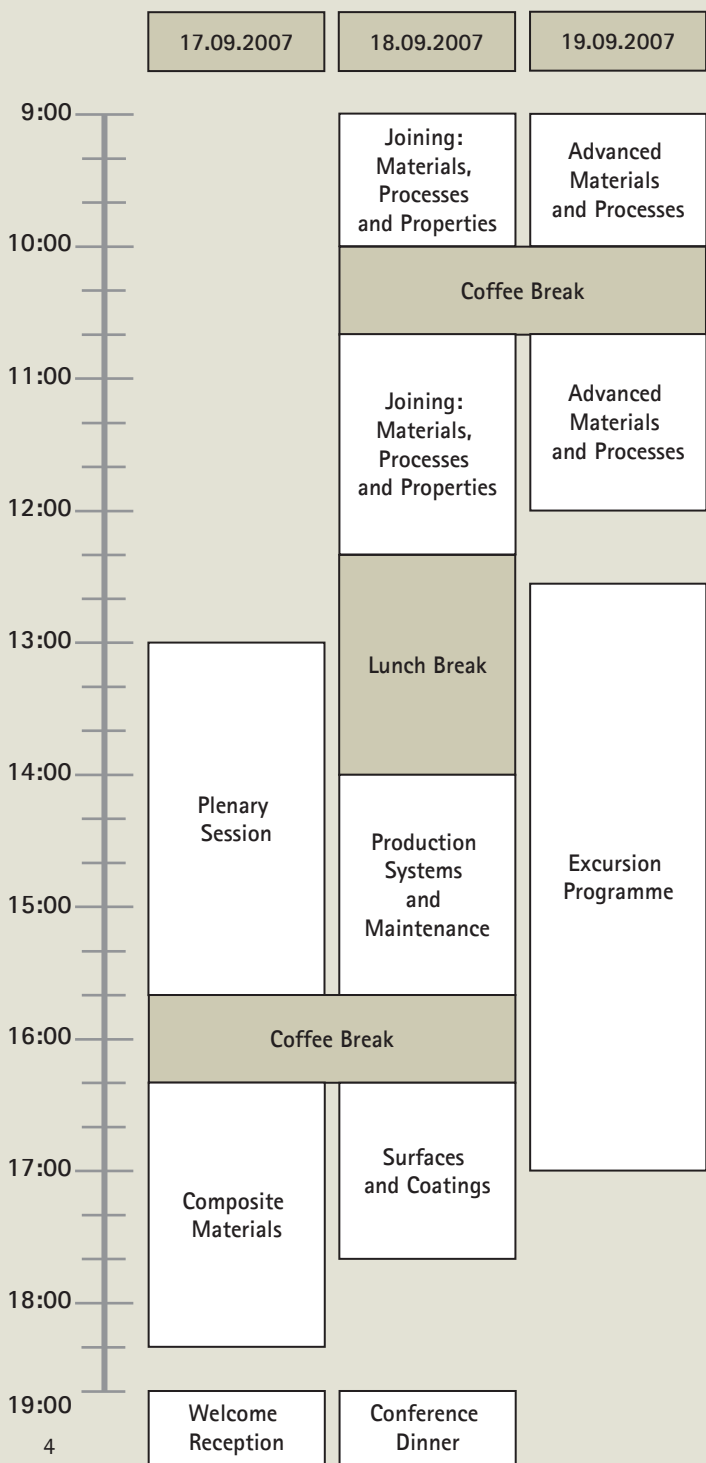
Finally, I am wishing you - aside from new insights - many fruitful discussions and a pleasant and successful stay in Bremen!

Yours faithfully,



Prof. Dr.-Ing. Frank Vollertsen

Schedule



Plenary Session

13:00	Opening Ceremony hosted by F. Vollertsen
13:15	Advanced material and process technology for new aircrafts B. Räckers, A. Walter
13:45	Titan – status and potential H. Sibus
14:15	New manufacturing technologies for wind tunnels and ultra-large vessels S. Yuan, B. Teng
14:45	The electron beam as a versatile tool for welding and drilling of aircraft components T. Böhme
15:40	Coffee Break

Composite Materials

16:20	Production process engineering – Modelling and evaluation of process chains for composite manufacturing B. Scholz-Reiter, M. Lütjen
16:40	Fast manufacturing of thermoplastic composite parts and challenges for a fully-automated process chain C. Peters, H. Purol, A. S. Herrmann
17:00	Process- and handling technologies for serial production of large composites parts C. Dörsch, I. Gebauer, D.H. Müller
17:20	Orbital drilling of high tolerance boreholes E. Brinksmeier, S. Fangmann
17:40	Process monitoring – Drilling of composite materials B. Kuhfuss, S. Schädlich
18:00	Novel UV-laser applications for carbon fiber reinforced plastics B. Denkena, F. Völkermeier, R. Kling, J. Hermsdorf

Joining: Materials, Processes and Properties

09:00	Fiber lasers for aerospace applications M. Grupp
09:20	Friction stir welding and hybrid laser welding applied to 6056 Aluminium alloy J. Verwimp, J. Gedopt, W. Van Haver, X. Stassart, A. Dhooge, B. de Meester
09:40	Development of new filler materials for welding of aluminum structures by spray forming C. Cui, A. Schulz, K. Schimanski, H.-W. Zoch, P. Baumgart, F. Syassen, R. Kocik
10:00	Coffee Break
10:40	Laser welding of high strength aluminum sheet with hypereutectic AlSi filler wire F. Buschenhenke, T. Seefeld, F. Vollertsen
11:00	Process development for laser joining of titanium–aluminium compound structures M. Grden, B.-M. Wischhusen, R. Kocik, F. Vollertsen
11:20	Investigation of laser beam joined titanium–aluminum–compound structures J. Schumacher, R. Tinscher, A. Irretier, N. Sotirov, O. Keßler, H. Bomas
11:40	Computer aided prediction of the welding distortion for the large aircraft atructures V. Ploshikhin, A. Prikhodovsky, A. Ilin, T. Frank, C. Heimerdinger, N. Jordan, K. Schimanski
12:00	Investigations to new fixturing principles for aerospace structures J. Leopold, D. Clauß, M. Klärner, A. Poppitz
12:20	Lunch

Production Systems and Maintenance

13:40	System-orientated analysis of the manufacturing of aircraft fuselage shells K. Schimanski, H.-W. Zoch, N. Jordan, R. Kocik, A. Walter
14:00	Production systems for aircraft structure parts N. Hennes, M. Queins
14:20	Factory planning and production management in a concurrent engineering environment R. Larek, C. Soehner
14:40	Productivity increase in aircraft component machining by hybrid kinematic structures B. Kuhfuss, C. Schenck
15:00	Off-line programming and simulation of major sub-assemblies in aircraft production D. Eickhorst, S. C. Lange
15:20	Reduced downtime of a V2500 jet engine by forecasting the maintenance effort B. Scholz-Reiter, J. Piotrowski
15:40	Coffee Break

Surfaces and Coatings

16:20	High average power Q switched Nd:YAG Lasers for surface treatment W. Rath, M. Rütering
16:40	Pre-treatment for adherence by dry ice blasting and CO₂-Snow blasting E. Uhlmann, A. El Mernissi
17:00	Centrifugal wheel blasting with sensitive blasting media E. Uhlmann, R. Hollan
17:20	Coating of fibre reinforced plastics (FRP) by thermal spraying R. Kocik, P. Knepper, K. Bobzin, F. Ernst, J. Zwick, T. Warda
17:40	Advanced diffusion coatings on jet engine components J. Kohlscheen, H.-R. Stock, H.-W. Zoch, H. Pillhöfer

Advanced Materials and Processes

09:00	Improved properties of aircraft stringer profiles by composite extrusion M. Schikorra, M. Schomäcker, T. Kloppenborg, E. Tekkaya, K. Weidenmann, E. Kerscher, D. Löhe
09:20	Deep rolling of fan and compressor blades F. Klocke, S. Mader, D. Breuer, B. Feldhaus
09:40	HPC milling of aluminium and titanium alloys in aerospace industry J. Giessler
10:00	Coffee Break
10:40	Rivet bore drilling with industrial robots J. Wulfsberg, D. Derfling
11:00	Machining induced residual stresses of structural parts out of wrought aluminum alloys B. Denkena, L. de León
11:20	Fatigue limit calculation of metallic components with property gradients F. Jablonski, J. Varvarikes, R. Kienzler
11:40	Ceramic matrix composites for aerospace applications D. Koch

Registration

For the purpose of registration, please use the enclosed registration form and fax to: +49 421 218 5063 or see www.bias.de/apt07.

Participation fees

Participation fee	Participant without presentation	Participant with presentation
Full Congress (APT '07 & 2 nd ICNFT)	EUR 900	EUR 780
International Conference on Applied Production Technology (APT '07), Sep. 17–19, 2007	EUR 550	EUR 490
2 nd International Conference on New Forming Technology (2 nd ICNFT), Sep. 20–21, 2007	EUR 450	EUR 395

The fees include attendance to the conference selected, one copy of the proceedings of the conference and coffee breaks. For APT '07, lunch on Sept. 18, 2007 as well as a welcoming reception on Sep. 17, 2007 and the conference dinner on Sep. 18, 2007 are included. For ICNFT, lunch on Sep. 20 and 21, 2007 as well as the conference dinner on Sep. 20, 2007 are included.

Payment

Please make your payment in EURO to:
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Please include the Delegate's name and the keyword "Bremen Production Days" as well as the conference selected on the money transfer. Registration fee must be paid in full prior to attending the Bremen Production Days.

Cancellation Policy

If you cannot attend the workshop you have the option to send a substitute. Please have the substitute bring your letter of confirmation to the registration desk. For cancellations before Aug. 1, 2007 there will be a 20 % processing fee for refunds. No refunds will be made on cancellations received after Aug. 1, 2007. All requests for refunds must be made in writing.

Contact

Prof. Dr.-Ing. Frank Vollertsen, Conference Chair

APT'07 Conference Office

c/o

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