



**ROYAL MILITARY COLLEGE OF CANADA • COLLÈGE MILITAIRE ROYAL DU CANADA**

PO Box 17000, Station Forces • CP 17000, Succursale Forces • Kingston, Ontario • K7K 7B4

CCIIW Visit Report – Philip Bates

26 September 2007

Subject: Annual Assembly of the IIW, 1-8 July 2007, Dubrovnik Croatia

I had the pleasure of attending Commission XVI (Polymer joining and adhesive technology ) sessions during the Annual Assembly of the IIW on 2-3 July 2007. Approximately 5-10 representatives from Canada, Germany, the United States, Japan, and the Czech Republic came to the two sessions. The Commission chair was Dr. Chung Wu of the Visteon Corp from the U.S.

The Commission was organized much like a conference with approximately 4 papers given per day. I authored and presented two of these papers. They were:

- P.J. Bates, M. Aghamirian, M. Kontopoulou, R. Prabhakaran B. Baylis, “Use of Piezoelectric Shear Stress Transducers in Vibration Welding Quality Control”, International Institute of Welding Congress, (July 2007).
- M. Chen, G. Zak, P.J. Bates, “Estimating Contour Laser Transmission Welding Start-up Conditions Using a Novel Non-Contact Method”, International Institute of Welding Congress, (July 2007).

Both of these papers have been submitted to *Welding in the World* for peer-review. I also co-authored a third entitled:

- C-Y. Wu, P. J. Bates, M. Aghamirian “Effect of Geometry on Vibration Welding of ABS and PMMA”, International Institute of Welding Congress, (July 2007).

From the point of view of volume of technical information, Commission XVI does not attract enough delegates or papers to compete with the welding/joining sessions of Conferences such as the Society of Plastic Engineers’ ANTEC. It does however provide more possibilities for in-depth discussion during the longer and more informal presentations. I very much enjoyed these debates. From an academic viewpoint, it was good to see that work done in Canada in general, and Kingston ON specifically, rates favourably with research done by the German Universities who, without a doubt, are the strongest in the world in the polymer welding area. By way of example, at the assembly, the German Welding Society distributed free copies of their new journal entitled “Joining Plastics - Fügen von Kunststoffen” devoted solely to plastic welding and joining. The first edition contains only the work of various German researchers. More information on this publication can be found at : <http://www.joining-plastics.info/>

During the meeting, I brought up the point that the Commission should start performing activities more in line with those of other metal welding groups. As a first step, Commission XVI will begin work on polymer welding terminology. A preliminary meeting has already been held between myself, Prof. Dr.-Ing. Volker Schöppner from the University of Paderborn (D) and Chung Wu. I hope to see this continued in Austria.

I will be attending the Annual Assembly and International Conference of the IIW in Graz Austria in 2008. I would like to be the Canadian Delegate for Commission XVI. Please let me know what I would need to do for this to happen.

I would also like to take this opportunity to thank the CCIW for funding the registration at the IIW Annual Assembly. I very much appreciated their financial support.

Best regards,



Phil Bates  
Professor and Canada Research Chair in Polymer Processing and Joining

Department of Chemistry and Chemical Engineering  
Royal Military College of Canada  
PO BOX 17000 STN FORCES  
Kingston, Ontario, Canada, K7K 7B4

RMC phone: 613-541-6000 x6609  
fax: 613-542-9489  
email: bates-p@rmc.ca  
office: 2103 Sawyer Module 5