

SHOULD ADHESIVE APPLIERS BE CERTIFIED?

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***Adhesives & Sealants Industry (ASI) –
“Strategic Solutions”***

August 2007

Should adhesive applicers be certified? In Europe, that question is increasingly being answered with a “YES!” In 1994, Institut fuer Fertigungstechnik und Angewandte Materialforschung (IFAM) within the Fraunhofer Institute in Bremen, Germany, introduced a course of instruction to provide this certification. Since then, over 2000 students have been certified.

The driving force for this certification started in 1987, when a working group comprised of adhesive manufacturers, end-use companies, research institutes and the German Welding Society met to discuss the future of joining for high performance applications. This group recognized that the future growth of adhesives in these applications would be limited significantly without the development of qualified personnel to use and apply them.

The DIN EN ISO 9001 standard defines welding technology as a “special process”. Special processes are production steps that cannot be tested in a non-destructive manner with 100% safety. This means it is not possible to determine or predict the mechanical behavior and long term stability of each joint. While it is possible to test welded joints nondestructively, it cannot be done with the desired certainty. Recognizing that adhesive-bonded joints have even more factors that can influence the quality of a joint, it would be viewed as more of a “special process” than welding, thereby requiring knowledgeable personnel in the companies using adhesives.

Fortunately, the German Welding Society has a great deal of experience with the certification process, since it played a key role in developing the certification process for welders in Germany, which is now acknowledged globally. With its assistance, three separate courses were developed by IFAM to meet the adhesive industry’s needs at the technical decision level, the supervisory level and the adhesive application level within a company. These courses are similar in content and rigor to the courses developed for welders.





The European Adhesive Bonder (EAB) certification involves a one-week course of instruction, which includes lectures and laboratory work. It is designed to help workers performing the bonding operation to understand the work instructions in each special context, and to act appropriately in the production environment. The European Adhesive Specialist (EAS)

certification requires three weeks of instruction and is designed for supervisors, who must explain and supervise the production output. The European Adhesive Engineer (EAE) certification involves a rigorous eight-week instruction period. This program is designed to help technical management to think with an interdisciplinary perspective, from product development through production.

Many students are now attending these courses at the recommendation of those who have already been certified. The IFAM program got an additional boost from the Eisenbahnbundesamt (EBA), the German supervisory authority for railway issues. Because of increasing adhesives use in this industry, and due to safety concerns, EBA has mandated that all suppliers to the railway industry have individuals who are certified with the IFAM courses. The same standard was applied to the welding industry in the 1990s.



In May 2007, two ChemQuest senior staff members, Dr. Richard Hartshorn and myself, completed the EAE coursework and became certified European Adhesive Engineers. In addition, ChemQuest reached an agreement with IFAM to provide these courses in North America.

Although certification is not required in the United States at this time, it is possible that certain industries will require it in the future, just as they have required it of welding. However, even without the requirement for certification, it is likely that any company applying adhesives in critical industries - where the failure of the adhesive could result in injury or the loss of life, or where adhesive failure could result in significant financial loss or liability - would benefit from its employees



developing a better understanding of adhesives, surface preparation, and critical application parameters, as well as health and safety issues. Also, companies doing business in Europe will benefit from having employees with a certification that is recognized and respected on the continent.

The IFAM courses are well designed and have been tested and refined over the past 14 years. ChemQuest has plans to offer a one-week European Adhesive Bonder course near the end of this year or early in 2008.



About the Author



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The ChemQuest Group, Inc.,

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Founder of The ChemQuest Group, Inc., Bill has worked with clients worldwide in the Coatings and the Adhesives and Sealants industries on issues ranging from acquisitions and divestitures to strategic market development and growth decision. He has been a frequent speaker on market dynamics and management for major industry associations and is quoted regularly in trade publications. Dr. Broxterman is a graduate of Xavier University with B.S. and M.S. degrees and received a Ph.D. from Purdue University. He held Director level management and strategic planning positions at Borden Chemical and research and development management positions at Dow Chemical prior to founding ChemQuest.

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