



March 11, 2009

Attention QI Customer,

In conjunction with SAE International, Quality Industries will host the following:

### **SAE International**



### **Adhesive Bonding Technology Seminar**

**Course times will be from 7:30 AM to 4:30 PM on April 23, 2009 and from 7:30 AM to 3:30 PM on April 24, 2009. The seminar will be presented at Quality Industries.** The description as copied from the SAE International Website ([www.sae.org](http://www.sae.org)) is as follows.

*The overall objective of this seminar is to offer a sound assessment of the latest developments in adhesive bonding technology, available materials and methods. The course will focus on industrial applications of adhesives, discuss case histories and present approaches to solving existing problems in selection, process, quality and efficiency. The seminar is appropriate for those with limited to moderate knowledge of adhesives who need, or want to learn more. In addition, current adhesive users will become familiar with advances and developments in this area.*

#### ***Learning Objectives***

*By attending this seminar, you will be able to:*

- *Explain the overall adhesion phenomenon; requirements for a good adhesion; reasons for adhesion loss and how to prevent it*
- *Describe surface and pretreatment technology*
- *Select adhesives, primers and sealants, and differentiate their specific properties, as well as costs and application methods*
- *Review joint design, bonding techniques, latest developments and future trends*
- *Illustrate how to save costs by implementing more efficient processes and selecting the right materials*

#### ***Who Should Attend***

*All manufacturing personnel working with adhesives; design engineers, process engineers, quality control, technical service and chemists.*

**Prerequisites**

*Participants should have an undergraduate engineering degree.*

**Seminar Content**

- *Working with Adhesives*
  - *Adhesion phenomenon*
  - *Requirements for a good adhesion*
  - *Optimum process conditions*
- *Surface Engineering*
  - *Surface preparation & conditioning*
  - *Evaluation of surface preparations*
  - *Primers & adhesion promoters*
- *Designing Joints for Adhesive Bonding*
  - *Manufacturing with adhesives*
  - *Adhesive selection & properties*
  - *Bonding of metals, alloys & glass*
  - *Application, process & troubleshooting*
- *Bonding of Plastics & Composites*
  - *Processes & special considerations*
  - *Surface treatments*
  - *Adhesive bonding*
- *Effects of Environment*
  - *Durability assessment & life prediction for adhesively bonded joints*
- *Testing & Analysis*
  - *Rating & comparing adhesives*
  - *Screening adhesives for primary & secondary applications*
  - *Non-destructive evaluations*
  - *Test methods & analysis*
- *Quality Control of Materials & Bonded Assemblies*
- *Submittals from Attendees & Discussions*

**Instructor(s):** *Jamil Baghdachi*

*Dr. Baghdachi serves as the President of Innovative Technical Systems Corporation and is a Professor/Program Director at Eastern Michigan University, Coatings Research Institute. He has been actively involved in adhesive bonding and coatings technologies, their applications and the science of adhesion for the past 25 years. An active consultant for the industry, he has been conducting workshops on adhesive bonding, coatings and paint, corrosion, and plastics for the past 20 years. He is the author of two technical books, has published 152 technical papers and holds 41 patents in the above areas. He is a frequent speaker for professional organizations including SAE, ASM, SME and ESD. Prior to his current positions, Dr. Baghdachi was on the technical staff of BASF Corporation and ARCO Chemicals. He received his B.S. and M.S. in Chemistry from the University of Tennessee and a Ph.D. in Chemistry from the University of Mississippi and worked as a post-doctoral fellow at the University of Massachusetts.*

*1.3 CEUs*

***Testimonial***

*"Excellent course for those thrown into the adhesive world without previous experience joining substrates."*

*Stephen Kaye  
Product Engineer  
Rockwell International*

*"The information received in this seminar is a must for those working with today's adhesives. The instructor is a fountain of knowledge."*

*R.E. Cholez, Jr.  
Director of Research & Development  
Jasmes Gaskets, Inc.*

*"Absolutely essential for those suppliers who must understand their customers' needs."*

*James F. Turnbach, Jr.  
Tech Service Rep  
BASF Corporation*

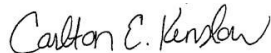
*"The topics were covered in a manner which demonstrated real world applications. The examples worked well to compliment the lecture."*

*Lynn M. Schurter  
GSC Scientist  
Pilkington North America, Inc.*

**Quality Industries is extending an invitation to our direct customers. Your cost to attend this seminar at our facility will be \$850.00 per person.** This price includes all handouts presented by Mr. Baghdachi, his instructional time, and lunch for both seminar days.

If your employees would like to attend, please contact me before end of business on March 27, 2009 as we must inform SAE International of the number of attendees so they can supply proper handouts. I will need the name, title, and company name of all attendees. We will take reservations on a first come first serve basis and limit the class size to 24 people.

Sincerely,



Carlton Kinslow  
Engineering Manager

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