

**Kay & Associates**  
Brazing Consultants  
4 Lawton Drive, Simsbury, CT 06070

## **Brazing Seminars**

Studio City, CA -- April 20-22, 2010  
Hartford, CT – May 18-20, 2010  
Greenville, SC – October 5-7, 2010  
Hartford, CT – Nov. 16-18, 2010

The first Spring-2010 seminar will be held in Studio City, California at the fabulous Sportsmen's Lodge Hotel (1-818-769-4700), near Universal Studios (the hotel has a free shuttle service to the Studios)! The second, identical Spring seminar, will be near Hartford, CT at the Ramada Inn (1-860-623-9494) next to Bradley Airport. Then in the Fall, we'll be heading south in early October to The Embassy Suites & Conference Center (1-864-676-9090) in Greenville, South Carolina, and in November we'll come back once again to the Ramada Inn in CT. Keep your travel distance short by picking the date and location best for you!

*Notify your associates, your suppliers, your customers.....anyone who needs to understand brazing! You and they both benefit!*

These high-powered, 3-day programs (each runs Tuesday through Thursday) cover all the essentials for successful brazing of commercial and aerospace components. The improvements to brazing operations that have resulted from these seminars have paid for the cost of this seminar many times over at many companies! So use the attached registration form, and register today!

Go to: [www.kaybrazing.com](http://www.kaybrazing.com) to register on-line using your credit card, or to download Registration Forms, or to get more seminar info!

Sincerely,  
KAY & ASSOCIATES



W. Daniel Kay  
President

Phone: (860) 651-5595  
Fax: (860) 651-1919

e-mail: [dan@kaybrazing.com](mailto:dan@kaybrazing.com)  
Web page: [www.kaybrazing.com](http://www.kaybrazing.com)

**Kay & Associates**  
**Brazing Consultants**  
4 Lawton Drive, Simsbury, CT 06070

## **Brazing Seminars**

**Studio City, CA -- April 20-22, 2010**

**Hartford, CT – May 18-20, 2010**

**Greenville, SC – October 5-7, 2010**

**Hartford, CT – Nov. 16-18, 2010**

Since brazing plays an important part in some of your company's products, plan to have one or more of your people attend one of the high-powered, three-day (Tues-Thurs) seminars being held in 2010. Contact your people today to have them register! They WILL truly benefit from having attended this program! They will learn answers to:

- What are the most common mistakes made in brazing shops today that lead to poor brazements and rejected parts, and how to avoid those mistakes.
- How to significantly reduce the cost of your current brazing process, and get a better braze with improved customer satisfaction. Yes, it can be done!
- How important is fluoride-ion cleaning (FIC) in repair brazing? How should it be used most effectively? Is there a "best way" to build-up worn surfaces for long life?
- How to gain confidence that your brazing process is optimized for your customer's needs, by knowing which things should and should not be included in your process.
- What specific things must be included in any inspection process after brazing, and which procedures might strictly be wasteful of your time and money.
- Which brazing process is best for certain base metals, and why? For example: should you use vacuum or induction-brazing? Which is best for different base metals?

These are just a few of the many topics that are covered in these intensive 3-day seminars. So call today, and fax in your registration form right away (or, register on-line)!

Sincerely,  
KAY & ASSOCIATES



W. Daniel Kay  
President

Phone: (860) 651-5595  
Fax: (860) 651-1919

e-mail: [dan@kaybrazing.com](mailto:dan@kaybrazing.com)  
Web page: [www.kaybrazing.com](http://www.kaybrazing.com)

# Brazing--A Great Joining Process for the 21st Century!

## Plan to Attend a 3-day Kay & Associates Brazing Seminar Near You!

Brazing is a unique joining process that has proven to be one of the most versatile methods by which to permanently join many different kinds of metals/non-metals together in a variety of industries, including aerospace, automotive, electrical power, petrochemical, etc.

Many people think they know how to braze, but they often don't really understand why brazing works. It has been proven over the years that when people involved in brazing understood the concepts taught in these seminars, and implemented them in their operations, the vast majority of their brazing problems disappeared! Result: higher productivity, lower rework, higher customer satisfaction, and higher profits!

These **Kay & Associates** high-powered three-day intensive seminars cover all the essential elements of brazing in a way that is not only easily understood, but very interesting as well. All seminars run from 8:00 AM until 5 PM each day.

### What will be covered during the three days? Here's some of the topics:

- What is brazing, and why does it work?
- Metallurgy of brazing
- Capillary action
- Joint design
- Impact of service stresses on strength
- Atmospheres (vacuum, and gaseous: hydrogen, nitrogen, argon, etc.)
- Brazing filler metals (BFM)
- Furnace brazing: vacuum, belt, and retort
- Torch brazing
- Induction brazing
- Resistance brazing
- Preparation of parts for brazing
- Fluoride ion cleaning (FIC)
- Repair brazing and surface buildup
- Honeycomb brazing
- Assembling and fixturing parts the right way
- Thermocouples
- T-specimens in brazing
- Distortion control
- Optimal brazing cycles
- Quality control and inspection in brazing

### **Locations:**

**Studio City, CA (April 20-22, 2010)**

**Greenville, SC (Oct. 5-7, 2010)**

**Hartford, CT (May 18-20, 2010)**

**Hartford, CT (Nov. 16-18, 2010)**

**Who should attend this seminar?** Anyone who, by their decisions or actions, has an impact on the brazing operations in their plant: owners, managers, design engineers (brazing begins on the "drawing board"), metallurgists, process engineers, shop leadpersons, operators, quality control and inspection personnel, maintenance personnel, sales persons. When you understand the brazing process, you'll be able to help your customers better.

**Instructor:** Dan Kay (BMetEng, MBA), who operates his own brazing consulting practice based in Connecticut (since 1996), has been involved full-time in brazing for more than 35-years, and has taught brazing seminars throughout that entire time period. He received his Bachelor of Metallurgical Engineering degree from Rensselaer Polytechnic Institute in 1966, and his MBA from Michigan State University in 1982. He spent seven years with Handy & Harman, where he not only taught their torch-brazing seminars, but spent a lot of time in the field helping customers solve both torch and induction brazing problems. From there he went to Wall Colmonoy Corporation, where for fifteen years he worked closely with furnace brazing operations around the world, both atmosphere and vacuum, still teaching brazing seminars every year along the way. He was also responsible for the production of a highly successful brazing-newsletter that went out to thousands of people around the world. Whatever method of brazing you are using (torch, induction, resistance, or furnace), you will find that Dan will provide much valuable information that you will be able to quickly apply in your operations to increase productivity.

# Registration Form

(Fax to 860-651-1919)

Please register me for the seminar at the location checked-off (✓) below:  
(If you prefer: Register on-line at [www.kaybrazing.com](http://www.kaybrazing.com) )

- Studio City, CA (April 20-22, 2010)       Greenville, SC (Oct. 5-7, 2010)  
 Hartford, CT (May 18-20, 2010)       Hartford, CT (Nov. 16-18, 2010)

**Cost:** \$1695 per person. If two or three register from same company location at same time on same registration form, fee is reduced to only \$1650/person. For four or more from the same plant location, registering together on same form, fee is only \$1625/person.

Please register the following \_\_\_\_ person(s)\* for the brazing seminar selected above:  
(NOTE: Do not use this form if you are registering on-line. Register by only one method please.)

Your Name: \_\_\_\_\_ Position: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

What brazing process and filler metals are you using now in-house? \_\_\_\_\_

What do you want to learn at this seminar? \_\_\_\_\_

\*Additional Persons Registering with you: \_\_\_\_\_

**What's Included:** Your fee covers the costs for the seminar, books and handouts, a buffet lunch each day, and refreshments during breaks each morning and afternoon. NOTE: Attendees are responsible for costs of their own rooms, morning & evening meals, transportation, and incidentals.

Seminars go from 8:00 AM to 5 PM each day (including last day of seminar), so plan accordingly!

**Payment:** Reservations require full payment in advance, by check, or by credit card (on-line only).

If you are not registering on-line, fax this Registration Form to 860-651-1919, and then send check (corporate or personal) to the address below. This will guarantee your place(s) in the seminar. Phone reservations must be followed up immediately by using one of the methods just described.

**Cancellations:** Cancellations by attendees two weeks prior to seminar will lose one-third of fee; one week prior to seminar will lose one-half the fee; during week of seminar will lose entire fee. No-shows lose entire fee. Kay & Associates reserves the right to cancel seminars for lack of registrations. If that occurs, Kay & Associates will notify you no later than ten (10) days prior to the seminar dates, and either refund your money, or re-schedule you to another seminar date if you prefer.

**Kay & Associates, 4 Lawton Drive, Simsbury, CT. 06070**  
Phone: (860) 651-5595      Fax: (860) 651-1919

# Kay & Associates

# Brazing Seminar

Dan Kay, Instructor

## Day One

8:00 Welcome & Orientation  
8:15 Review of Books and Materials, and Introductory "Quiz"  
8:45 Brazing Fundamentals  
10:00 Break  
10:15 Metallurgy of Brazing  
12:00 Lunch  
1:00 Designing for Brazing  
2:45 Break  
3:00 Designing for Brazing (Cont'd)  
5:00 Close

## Day Two

8:00 Brazing Filler Metals  
10:00 Break  
10:15 Brazing Filler Metals (Cont'd)  
12:00 Lunch  
1:00 Atmospheres for brazing  
2:30 Break  
2:45 Atmospheres (cont'd)  
4:00 Break  
4:10 Health & Safety Issues in Brazing  
5:00 Close

## Day Three

8:00 Corrosion in Brazing  
8:30 PreCleaning & Surface Preparation  
9:15 Break  
9:30 Assembly & Fixturing  
10:15 Torch Brazing  
11:00 Break  
11:15 Furnace Brazing  
12:00 Lunch  
1:00 Furnace Brazing (cont'd)  
1:45 Break  
2:00 Other forms of Brazing (torch, induction, etc)  
2:45 Break  
3:00 Inspection and QA Issues  
4:00 Final Exam  
5:00 Close