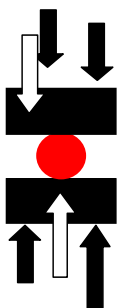


***Forging Industry Association Presents...***

## ***Induction Heating-For Forging***

- √ Basics of Induction Heating
- √ Induction Heating Power Supplies
- √ Material Handling
- √ Induction Coil Design/Repair
- √ Electrical Control Systems
- √ Water Cooling Systems - PEST
- √ Preventative Maintenance

***A One Day Seminar  
November 6, 2008  
Crown Plaza - Detroit- Metro Airport  
Detroit, MI***



***This Is the Only Induction Heating Seminar  
Focused Exclusively On the Forging Industry***

*Forging Industry Association, 25 West Prospect Avenue, Suite 300  
Cleveland, Ohio 44115 (216) 781-6260 Fax (216) 781-0102  
Info@forging.org www.forging.org*

# *Induction Heating-For Forging*

## *Who Should Attend?*

*Training is targeted to Plant Floor Employees who have had some working experience with Induction Heating Systems. Persons suggested to attend include:*

- *Set-Up And Maintenance Employees*
- *Forge Equipment Operators*
- *Forge Foremen*
- *Plant Engineers*

## *Training*

*Training will be generic and applicable to all sizes and brands of forging induction heating systems and equipment. A specially developed booklet "Induction Heating-For Forging" will be distributed and used as the primary training text.*

## *Seminar Leaders*

- *Brian Lockitski, Inductoheat, Inc.*
- *Aaron Meyette, Inter-Power Corporation*
- *Paul Sturm, Ajax Tocco Magnethermic*

## *Seminar Fee*

### *FIA Members*

- *\$250.00 for first attendee*
- *\$225.00 for second attendee and additional attendees*

### *Non-FIA Members*

- *\$375.00 for each attendee*

*This includes all fees, materials, breaks, and lunch. Attendees are responsible for their own hotel expenses. Please complete and return registration form to FIA by October 6, 2008.*

*Registrations may be canceled and will be refunded as follows: 100% through October 6, 2008; and no refunds thereafter. Substitutions are permitted any time.*

# *Induction Heating-For Forging Seminar*

*November 6, 2008*

## *AGENDA*

*7:30 A.M. Registration and Continental Breakfast*

*8:00 A.M. Seminar Promptly Starts*

*Modules:*

- Basics of Induction Heating*
- Induction Heating Power Supplies*
- Material Handling System*
- Induction Coil Design/Repair*

*12:00 P.M. Lunch*

*1:00 P.M. Seminar Resumes*

*Modules:*

- Electrical Control Systems*
- Water Cooling Systems - PEST*
- Preventative Maintenance*
- Seminar Overview*

*4:30 P.M. Seminar Concludes*

### **LOCATION:**

*The Crown Plaza – Detroit – Metro Airport Hotel is located near the Detroit – Metro Airport, and has complimentary shuttle service 24 hours per day.*

*The address of the Crown Plaza Hotel is: 8000 Merriman Rd., Romulus, MI, Phone # is: 734-729-2600. Workshop attendee's park free at the hotel's parking facility.*

*The Crown Plaza room rate is \$119.00, plus tax per night, for Workshop attendee's. Participants are expected to pay room charges directly to the hotel upon departure. Major credit cards and travelers checks are accepted. **Attendees planning on staying at the Hotel are asked to make their own sleeping room arrangements.***

**INDUCTION HEATING-FOR FORGING  
ONE-DAY SEMINAR  
Thursday, November 6, 2008  
Crown Plaza - Detroit - Metro Airport Hotel**

**Registration**

Please register the following individual(s) from our company. Payment of tuition fee for each registrant should accompany this form. Fees are non-refundable after October 6<sup>th</sup> (substitutions allowed). Participants will be expected to pay hotel charges direct upon departure.

Name \_\_\_\_\_  
Title \_\_\_\_\_ Nickname \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

**FIA Members:**

\$ 250.00, first attendee  
\$ 225.00, second attendee and additional attendees

**Non-FIA Members:**

\$ 375.00 for each attendee

**Payment to FIA:**

Check Enclosed    Credit Card:     VISA         Master Card         AMEX

Credit Card #: \_\_\_\_\_    Expiration Date: \_\_\_\_\_  
(3-digit # on back of card) \_\_\_\_\_

- What aspects of this course are you most interested in?
  
  
  
  
  
  
  
  
  
  
- Do you have a specific problem or question that you would like an instructor to address in class?

**Return Registration Form by October 6, 2008 to:**

Forging Industry Association  
25 W. Prospect Avenue, Suite 300  
Cleveland, Ohio 44115  
FAX: (216) 781-0102  
ATTN: George Layne

Photocopy form if registering more than one person

## **TOPIC ABSTRACTS**

### **Material Handling System**

This section will review the different types of material handling systems available for feeding cut billets to an induction heating system, equipment for feeding billets through an induction coil and the different types of equipment available for interfacing with presses, hammers, upsetters and impactors. Several examples of equipment layouts will be presented.

### **Electrical Control Systems**

This section will review the different levels of electrical controls available on an induction heater for operators and engineers. This will include the different types of controls available for part run setups, operator interface controls, engineering setup & monitoring screens and methods for controlling the heating process.

### **Preventative Maintenance**

This section will cover what is considered the most important task on an induction heater, preventative maintenance recommendations. A review of the recommended daily, weekly, monthly, semi-annually and annual preventative maintenance lists will be presented with examples of what happens when preventative maintenance is not completed.

### **Basic of Induction Heating – PEST**

This section covers a brief review of induction heating principles and Rules of Thumb (ROT's). ROT's are then applied, through several examples, to show the attendees how they can determine the approximate KW, Frequency and Coil Line Length for a given heating application for an Induction heater for Carbon Steel billets. Additional ROT's for Copper, Aluminum and Brass are also discussed.

### **Water Cooling Systems – PEST**

This section will discuss the various type of water cooling systems employed with Induction heating systems. Water characteristics and maintenance requirements will also be discussed.

### **Induction Heating Power Supplies**

This section will discuss the various types of power supplies used for heating stock for forging along with the advantages and disadvantages of each. Also included will be information for the user as to power requirements and what should be discussed with their power company prior to purchasing any system.

### **Induction Coil Design/Repair**

Basic coil design criteria will be discussed along with how and why coils of various lengths and diameters are used. Basic maintenance procedures from simple in plant maintenance to sending the coil out for major repairs.