

# TECHNICAL PRESENTATION MEETING MONDAY, DECEMBER 14 2009



ASM International, Indianapolis Chapter

## Holiday Inn Select

3850 DEPAUW BLVD, Indianapolis, IN 46268

### TOPIC:ACTIVITIES OF THE MATERIALS TECHNOLOGY INSTITUTE

Speaker: Mr. Galen Hodge - Associate Director - MTI

MTI is a research consortium formed by the chemical industry to solve problems of mutual interest within the industry. The topic of the presentation will be an overview of MTI, its origins, organization and functions. The speaker will highlight several of the current projects that should be of interest to members of ASM.

Galen Hodge earned a PhD in Materials Engineering at Rensselaer Polytechnic Institute. He conducted Four years of research in the steel industry and 1 year in nuclear industry prior to joining Haynes. He has 32 years of experience in Nickel alloys at Haynes, about half in Research and half in Sales and Marketing. He is Fellow and life member of ASM, Fellow of NACE and MTI.

### A WORD FROM CHAIRMAN

By Henry White

The Cummins Fuel Cells Systems tour has come and gone. Thanks Steve, YC, Madeleine, and others at Cummins for your hospitality. We had a great time (see website for pictures) and hope to do it again sometime in the future.

1. It is with great pleasure that I announce our December 14, 2009 speaker, Dr. Galen Hodge of the Materials Technology Institute (MTI). For those of us who are not familiar with the organization, MTI ( <http://www.mti-global.org/mti/t>) is a research consortium formed by the chemical industry to solve problems of mutual interest within the industry. Galen, MTI Fellow and Associate Director, will give an overview of MTI, its origins, organization and functions. He will highlight several projects which are of interest to members of the ASM. I personally have interacted with Galen for over 20 years and am looking forward to his talk.

It is with great pleasure that I also announce two other matters.

The Chapter is offering a Metallurgy for Non- Metallurgist Course at the Roll Royce Training Center beginning Wednesday January 27, 2010 through April 21, 2010 (5-7 pm for 13 weeks). To

(Continued on page 2)

#### MEETING PROGRAM

5:00 PM SOCIAL  
6:00 PM DINNER  
6:45 PM PRESENTATION

#### CHAPTER OFFICERS

Chairman:	Henry White
Vice-Chair	Lee Flower
Treasurer	Pat Tillman
Secretary:	David Hershberger

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## A WORD FROM CHAIRMAN

(Continued from page 1)

register or from more information please contact Bill Baker (bill@iscastings.com or 317-546-2427 Ext. 224)

- We will be having a re-tour (for those interested who missed the September tour) of the facilities at Rolls Royce. The date and time will be announced at the December meeting. Attendance will be limited to 20 and registration will commence at the December meeting and will continue afterwards (i.e. announced by email, etc.) if space is available.

Merry Christmas to all, and hope to see you at the December 14, 2009 meeting.

Henry J. White, PhD, PE

Chairman, Indianapolis Chapter, ASM International

Past Chairman Elect- Metro New York/ New Jersey Chapter, ASM International

Past Chairman- Long Island Chapter, ASM International

E-Mail: [Henry White](mailto:Henry.White)



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## BACK BY POPULAR DEMAND: METALLURGY FOR NON-METALLURGIST COURSE

### Learning Objectives

Upon completion of this course, you should be able to:

- Describe how metals and alloys are formed and why
- Recognize how metals can be strengthened by alloying, cold-working, and heat treatment
- Determine why metals and alloys are not behaving as expected and can be made to behave as needed
- Choose what metal or alloy to use for its specific combinations of properties

Metals and alloys are used in the greatest variety of applications of all engineering materials. As such it is essential for those involved in manufacturing, engineering and construction to have an understanding of what metals are, how they behave, and why they behave differently than ceramics, glass, and plastics. It is also important to understand how they can be made stronger or more corrosion resistant, how they can be shaped by casting, forging, forming, machining, or welding, and how these processes can alter properties. This course provides this important knowledge to those who are not metallurgists.

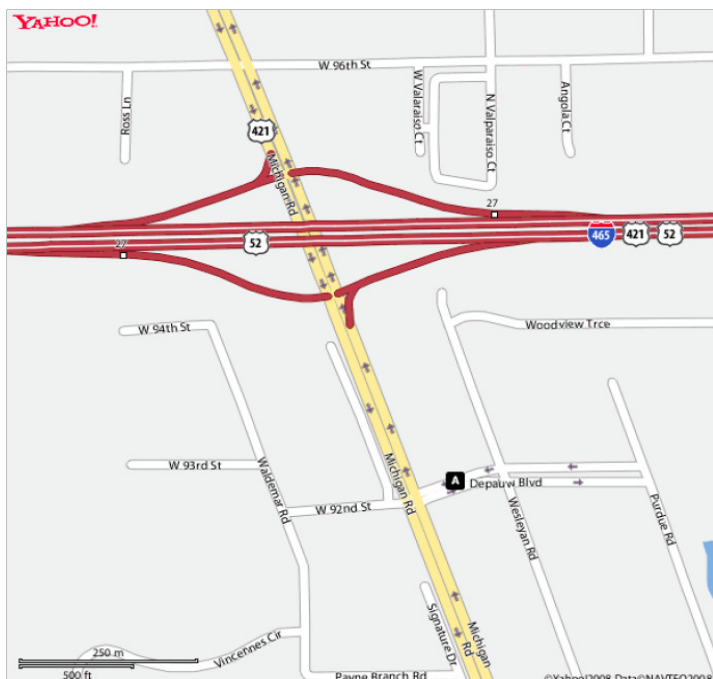
### Course Outline:

- Metals**
- Extractive Metallurgy**
- Solidification of Metals**
- Metal Forming**
- Mechanical Properties and Their Measurement**
- Steels and Cast Irons: Applications and Metallurgy**
- Heat Treatment of Steel**
- Case Hardening of Steel**
- Strengthening Mechanisms**
- Nonferrous Metals**
- Joining**
- Corrosion and Corrosion Prevention**
- Quality Control and Failure Analysis**
- Materials Characterization and the Selection Process**

Use registration form on page 4.

## LOCATION

Holiday Inn Select,  
3850 Depauw Blvd, Indianapolis



## RESERVATIONS

David Fleckenstein  
(317) 882-8687  
dfleck2@sbcglobal.net

## ADMISSION

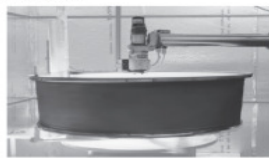
With Reservation: \$20.00; Without Reservation: \$22.00  
Student: \$10.00  
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## 2009-2010 CHAPTER YEAR CALENDAR

September 14	Meeting at the Heat Treat Conference Speaker: Arvid Casler - Carbide Derivative Technologies, Inc. Topic: The Materials World, a focus on Rare Earth Elements
October 19	Technical Presentation Speaker: Ed Richardson - Thomas & Skinner Topic: Dependence on Foreign Sources of Rare Earth Metals: A Case Study
November 9	Plant Tour - Cummins Engine Starting Point: TBA Starting Time: TBA
December 14	Sustaining Members' Night Dr. Galen Hodge - Materials Technology Institute Topic: Activities of the MTI
January 25	Trustee Visit Speaker: Arvid Casler Topic: A Balance for all Industries through Vacuum Molding Process
February, 15	Social Event: Wine Tasting Location: Chateau Thomas
March 22	Student Night/Scholarship Night Presentations by Purdue University Degree Candidates Topics: TBA
April 19	Business/Awards/Past Chair Night Speaker: Dr. Larry Paul - ThyssenKrupp VDM" Topic: TBA
May 17	Joint Meeting with Muncie Chapter Horse Shoeing Demo and Dining Location: Hoosier Park
June 22	Annual Golf Outing Location: TBD

**ASM International-Indianapolis Chapter  
Announces a 13 Week Course on  
METALLURGY FOR THE NON-METALLURGIST**

**Dates and Times: Wednesdays, 5:00-7:00 pm, January 27, 2010 thru April 21, 2010**

**Location: Rolls-Royce training center, Tibbs & Raymond, adjacent to Plant 5**

**Cost: \$475.00 per person**

**COURSE INFORMATION:**

The following topics are covered in the text. Classes will be taught by experienced metallurgists.

- |  |  |
|--|--|
| 1. Metals a history                            | 8. Case Hardening of Steel                               |
| 2. Extractive metallurgy                       | 9. Strengthening mechanisms                              |
| 3. Solidification of Metals                    | 10. Nonferrous metals; applications & properties         |
| 4. Metal Forming                               | 11. Joining  |
| 5. Mechanical properties and their measurement | 12. Corrosion and corrosion prevention                   |
| 6. Steels and cast irons                       | 13. Quality Control and Failure Analysis                 |
| 7. Heat Treatment of Steel                     | 14. Materials characterization and the selection process |

**TO REGISTER:** Return this form or just call or E-mail to:

Bill Baker , E-Mail [bill@iscastings.com](mailto:bill@iscastings.com) 317-546-2427 Ext. 224  
1101 N. Eleanor Avenue  
Indianapolis, IN 46214

*Register early! This class will fill up quickly.*

**PAYMENT:** Due at 1<sup>st</sup> class

Please enroll me in the class "Metallurgy For The Non-Metallurgist"

Name: \_\_\_\_\_ Job Title \_\_\_\_\_

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

Company: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

U.S. Citizen: Yes No