WPI Campus Center – Odeum A and B

Tuesday, December 4, 2012 (Steering Committee & Board Members Only)

1:30–3:30 p.m. CHTE Board Members Meeting
Chairman’s Room, WPI Campus Center

4:00 – 6:00 p.m. ACRC Steering Committee Meeting
Chairman’s Room, WPI Campus Center

6:30 p.m. Reception & Dinner (All Members)
Higgins House, WPI Campus

Wednesday, December 5, 2012 (Campus Center)

7:30 a.m. Registration & Breakfast
Odeum A & B, WPI Campus Center

8:00 a.m. Welcome – D. Apelian
Opening Remarks from ACRC Chair – D. Weiss
Opening Remarks from CHTE Chair – M. Pershing

8:45 a.m. Corporate Presentations
• Palmer Foundry – R. Logan
• Cummins – S. Ferdon
• AMG Aluminum – G. Hildeman

9:15 a.m. ACRC: Research Overview – M. Makhlouf
CHTE: Research Overview – R. Sisson

10:15 a.m. Break

PLEASE NOTE:
Combined Meetings are in black
Items in blue refer to ACRC meetings
Items in green refer to CHTE meetings
ACRC Project Presentations in Odeum A

10:30 a.m. Aluminum Nano-Composites for Elevated Temperature Applications (C. Borgonovo)

11:00 a.m. Alternate Eutectic Systems for Aluminum Casting Alloys (L. Wu)

11:30 a.m. Clean Aluminum Processing (S. Hudson)

12:00 noon Thin Wall Castings – Casting Solutions for Readiness (CSR) (L. Wang)

CHTE Project Presentations in Odeum B

10:30 a.m. Heat Treat Energy Usage and Reduction Calculation (Y. Lu, K. Rong)

10:50 a.m. NDT Testing for Hardness & Carburization Case Depth (L. Zhang, R. D. Sisson)

11:10 a.m. Improvements to Life of Alloys and Fixtures (M. Yang, R. D. Sisson)

11:30 a.m. On-Going CHTE Heat Treating Projects (R. D. Sisson)
  • Nitriding Simulation
  • Grain Growth
  • Hardness vs. %C
  • Tempering

12:00 p.m. Thermomechanical Processing of Light Alloys by Design – Applications of Computational Thermodynamics (D. Belsito, B. McNallie, A. Burt, L. Bassett, R.D. Sisson)

12:30 p.m. Lunch in Odeum C, Campus Center

Additive Manufacturing and Engineered Materials: A Disruptive Technology
Dr. Christopher M. Spadaccini
Lawrence Livermore National Laboratories

2:00 p.m. Focus Group Meetings – Session I (see page 3)

3:00 p.m. Focus Group Meetings – Session II (see page 3)
### Session I: 2:00 – 3:00 p.m. Focus Group Meetings

| ACRC | Alternate Eutectic Systems for Aluminum Casting Alloys  
|      | (L. Wu, M. Makhlouf)  
|      | *Mid-Century Room, Campus Center*  
|      | Clean Aluminum Processing  
|      | (S. Hudson and D. Apelian)  
|      | *Chairman's Room, Campus Center*  

| CHTE | Heat Treat Energy Usage and Reduction Calculation  
|      | (K. Rong)  
|      | *Hagglund Room, Campus Center*  
|      | Improvements to Life of Alloys and Fixtures  
|      | (R. Sisson)  
|      | *Hagglund Room, Campus Center*  

### Session II: 3:00 – 4:00 p.m. Focus Group Meetings

| ACRC | Aluminum Nano Composites for Elevated Temperature Applications  
|      | (C. Borgonovo and M. Makhlouf)  
|      | *Mid-Century Room, Campus Center*  

| CHTE | NDT Testing for Hardness and Carburization Case Depth  
|      | (R. Sisson)  
|      | *Hagglund Room, Campus Center*  

4:00 p.m. Reconvene in Odeum A-B

4:15 p.m. Meeting Adjourns
WPI Campus Center - Meeting Rooms

Top Level:
- Odeum A, B, C
- Hagglund Room
- Mid-Century Room
- Peterson Room

Middle Level:
- Morgan Room

Bottom Level:
Taylor Room
Chairman’s Room