

TMS – February 16, 2014

Furnace Workshop

<u>Time</u>	<u>Company</u>	<u>Presenter</u>	<u>Topic</u>	<u>Description</u>
8:00 – 8:45	Bloom Engineering Co.	Don Whipple 716-839-5300 dwhipple@bloomeng.com	Basics of Combustion and Environmental Considerations	The presentation will discuss the typical air/fuel combustion process with emphasis on ways to save fuel and minimize emissions.
8:50 – 9:35	Bloom Engineering Co.	Don Whipple 716-839-5300 dwhipple@bloomeng.com	Heat Transfer Available Mechanism	Optimizing available heat transfer mechanism for productivity and efficiency.
9:40 – 10:25	Harbison-Walker Refractories	John Sutton 412-375-6836 412-298-7595 cell	Refractory Selection for Aluminum Furnaces	Refractory selection for the aluminum cast house and rotary furnaces are based on fundamental refractory properties. Refractory considerations involve not only product selection, but lining types, installation methods and maintenance practices. Refractory brick and monolithic refractory products and construction considerations will be reviewed. Testing of refractories for metal contact applications is important in selection as operating conditions become more aggressive. New product technologies and recent developments in furnace lining dry-out modeling field results are reviewed.
10:25 – 10:40 Break				
10:40 – 11:25	Nederman (formerly Dantherm)	David Edgerton David.Edgerton@nederman.com 773-230-9207	Dioxin and Furan Issues	How dioxins are formed, how to avoid them and solutions on how to deal with them, when you do have them.
11:30 – 12:15	Melting Solutions, Ltd	Clive Hall	Principles and Fundamentals of Tilting Rotary Furnace Operation, Design and Application in the Secondary Aluminum Industry	Topics will include: <ul style="list-style-type: none"> • Why use a rotary furnace? • Background and development in the aluminum industry. • Examples of rotary furnace applications. • Design aspects: mechanical, refractory, combustion and controls. • Performance what is actually achievable and how to operate a rotary. • Economics of rotary melting. • Innovations and development of rotary technology. • Q&A

12:15 – 1:00 Lunch				
1:00 – 1:45	Altek	James Herbert	Aluminum Oxidation	Minimizing dross and metal losses in aluminum furnaces. Paper concentrates in different areas of the cast house to help operators understand how to reduce metal loss.
1:50 – 2:35	Pyrotek/EMP Inc.	Jim Grayson 501-276-4505 cell Jimgra@pyroteck-inc.com	Metal Circulation	This session focuses on the benefits of metal circulation in aluminum melters. Typical devices such as mechanical pumps and electromagnetic stirrers will be discussed highlighting cost versus benefit in different applications.
2:35 – 2:50 Break				
2:50 – 3:35	Gillespie & Powers	Ian Marsh	Metal Transfer	Hot metal tapping and flow control devices.
3:40 – 4:25	Bloom Engineering	Don Whipple	Preheated Air Benefits	Topics will include: <ul style="list-style-type: none"> • Heat exchange devices commonly used • Benefits • Concerns when applying