

Furnace Technology Systems Workshop
Preliminary Schedule

Sunday, March 3, 2013
San Antonio, TX

Time	Company	Presenter	Topic	Description
8:00 – 8:45	Bloom Engineering Co.	Don Whipple	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.	Jim Checkeye	Typical Burners Used in Aluminum Cast Houses	Discussion on burner types with respect to furnace configuration, efficiency, productivity and emissions.
9:40 – 10:25	Robinson Fans Inc.	Deanna Weaver	Blowers/Exhausters	This presentation will cover the basics of fan design. It will give you the understanding of how to read a fan curve and where they come from. It will also cover the importance of density and how to calculate it. We will also go over the fan laws and how to use them correctly. This is great class for those who are new to fans and a great refresher for those who are not.
10:25 – 10:40 Break				
10:40 – 11:25	Nederman (formerly Dantherm)	David Edgerton	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	Harbison-Walker Refractories	John Sutton	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.
12:15 – 1:00 Lunch				
1:00 – 1:45	The Schaefer Group, Inc	David W. White cell	High Efficiency Aluminum Melting in Reverberatory Furnaces and ... True ROI	This paper will expand on the “ranking of ROI” expenditures for aluminum furnaces: or, how to get the biggest “bang for your bucks” from quickest-to-slowest investment recovery.

				Efficiencies, ancillary equipment to enhance efficiency and refractory linings will be addressed. Different burner systems will be compared as well as the importance of cleaning the furnaces. This overall view of what it takes to save energy and money when operating a reverberatory melting furnace will allow you to specify the type of furnace and options that give you the best return on your investment.
1:50 – 2:35	Pyrotek/EMP Inc.	Jim Grayson	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	Melting Solutions, Ltd	Clive Hall	Principles and Fundamentals of Tilting Rotary Furnace Operation, Design and Application in the Secondary Aluminum Industry	<p>Topics will include:</p> <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
3:40 – 4:25	Gautschi Engineering GmbH	Oliver Moos	Aluminum Oxidation in Liquid Metal Furnaces	Our industry is focusing on dross processing in recent years rather than avoiding dross generation in the first place. This paper is concentrating on different areas of the cast house and furnaces to help operators to understand on how they can help to reduce the generation of dross. It will also show on how proper maintenance of the equipment has a direct influence on metal losses in a furnace.