

Sam Matson

Energy Manager - Commercial Metals Company

January 17, 2014

Commercialization Forum – “Keys to Success: An Engineering Consulting Perspective”

An individual with a graduate degree in engineering almost automatically brings a reputation for technical inclination, detailed understanding, and expertise in the field. Maintaining this reputation to maximize your success is challenging, especially as an engineering consultant where your position must be continuously justified.

The presentation will incorporate several common communication and organization ideas with first-person anecdotes to reinforce their importance.

Technical Presentation – “Transforming Process Data into Powerful Information”

Industrial processes often have instrumentation in place to protect the equipment and maintain safe conditions on the plant floor. For example, a temperature transmitter in a water-cooling circuit is monitored and used to shut down the process if the boiling point is reached. The data generated by these instruments during normal operation can be useful for insight into the process as well.

The presentation will include an introduction to the electric arc furnace (EAF) steelmaking process followed by several examples of using mass and energy balances to deduce the conditions inside of the 3,000°F process vessel.

Sam Matson

Energy Manager - Commercial Metals Company

1 Steel Mill Drive Seguin, Texas 78155

Sam.Matson@cmc.com (830) 372-8429

Dr. Matson began his professional career as a process engineer with Gas Cleaning Technologies (GCT) in Las Colinas, Texas in 2000. Since 2009 he has served as Energy Manager for Commercial Metals Company, a Fortune 500 international steel and recycling company.

Dr. Matson has spent most of his career working on environmental and energy related aspects of the steel, copper, ferro-nickel, and lead industries internationally.

Dr. Matson received a Bachelor of Science from The University of Texas at Austin in 1995, a Master of Science in 1998, and Doctor of Philosophy in 2000 from The University of Colorado at Boulder, all in Chemical Engineering. Sam’s graduate research combines mathematical optimization and

chemical/thermodynamic modeling of the electric arc furnace for melting scrap steel. Sam's PhD Dissertation is titled, "Dynamic Modeling and Optimization of an Electric Arc Furnace".

Sam has served as the chair of the AIST Electric Furnace Technology Committee since May 2011 and also chairs the EAF benchmarking program for the AIST. Sam has presented and published several technical papers in the area of EAF steelmaking, industrial ventilation, and pollution control in the primary metals industries. Sam is also a member of the Industrial Advisory Committee for Texas State Engineering Technology department.

Dr. Matson, as part of CMC's Energy Efficiency Program, is working toward a goal of reducing CMC's energy consumption by 25% by 2023.

Sam and his wife Rhonda have 3 children, ages 11, 9, and 3 and reside in San Antonio, Texas.