

Tuesday, August 25, 2009

Historical Metallurgy Box Lunch

“On the importance of reporting failures.

Or one reason why we study historical metallurgy”

12:05 – 12:45 (First-come-first-serve basis - Box Lunches) no reservations required. Limited seats available, therefore come early!

The Historical Metallurgy Committee of MetSoc will host a box lunch on Tuesday, featuring Dr. Larry M. Southwick, P.E., of LM Southwick & Associates in Cincinnati, Ohio, U.S.A.



Larry M. Southwick, P.E., has over 35 years experience in process engineering and design, financial and technology-related due diligence and business development consulting, plant troubleshooting, environmental engineering, engineering services sales and technical staff supervision, mentoring and management. Industries served include extractive metallurgy, oil refining (especially fluid catalytic cracking), synfuels (oil shale, oil sands, and coal gasification), and waste and residue processing for recovery and utilization of useful components. Clients include operating companies, financial institutions, the investor community, technology developers, and engineering companies. He has also been known to delve into the history of technology development. He has a BS and MS and completed the coursework and qualifying exams for a PhD in Chemical Engineering, He is a registered Professional Engineer in chemical engineering in California.

Abstract:

The history of extractive metallurgy is replete with examples of commercializing new processing technologies. Some involve mostly mechanical changes, whereas others focus on the chemistry, thermodynamics, mineralogy and processing sequences of metal extraction. The successes are widely reported, but failures seldom are. This is unfortunate, for usually we can learn more specifics on what makes processes and equipment work by studying and thoroughly understanding their failures. Such studies help make a demarcation of the operability (or economical) limits of a process, and help guide and prioritize further research towards a successful project. They can also assist in the development of often unrelated processes. Technology transfer (or support of new ideas) can move, for example, from gold to copper or from aluminum to nickel, from non-ferrous to ferrous industries, and vice versa, from metallurgy to petroleum or synfuels processing, and so on. New technologies are rarely wholly new, as many aspects of nearly every new process had been tried before. It is a rare technology for which a “development tree” of instructive or supporting examples cannot be extended back over 100 years. This presentation will discuss some of the roadblocks to studying earlier processes, especially failed ones, and present examples of how one overcomes such obstacles.