

Sweet Practice School Lessons

Then and Now

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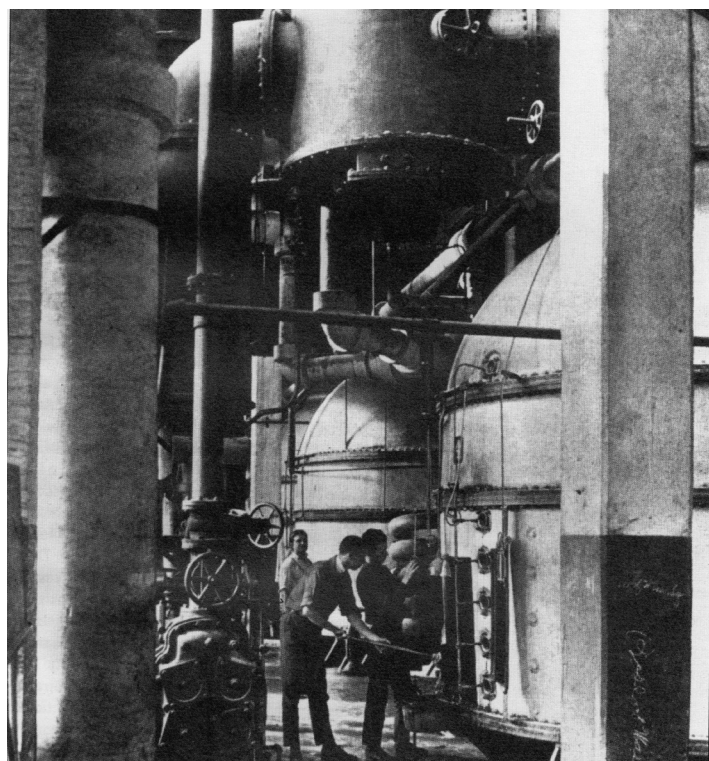
When I heard that I'd be running the Mawana Sugar Works (MSW) station, I recalled an old photograph in "The Flagship," John Mattill's great book on the history of the Practice School. The photo showed students working in the Revere Sugar Refinery. The date? 1920! I couldn't help but think, haven't all the sugar refining problems already been solved? Much to my delight, the short answer was 'No'!

Manufacturing plants must respond to competitive market forces or risk failure. The drive to continually improve quality, improve safety, and decrease costs never ends. There are always good problems to solve. MSW was no exception. The management there provided the students with an excellent set of problems, or 'opportunities' as we learned to call them, involving such classic chemical engineering operations as crystallization, evaporation, fluidized-bed drying, dust collection, and utilities management. All offered solid improvement opportunities to MSW's bottom line, which served as a great motivator for both students and company staff alike.

Referencing Mattill's book again, Dr. Arthur D. Little wrote back in 1915 on the purpose of the Practice School program: "In this [chemical engineering] profession, more truly than any other, one



Bob Hanlon (third from right) and the Mawana Sugars student group take a break after participating in the Indian spring festival of Holi.



1920: Learning the intricacies of sugar boiling and grain-ing at the Revere Sugar Refinery, Boston. Taken from The Flagship: The MIT School of Chemical Engineering Practice 1916-1991.

needs to get into the water to learn to swim." The MSW station clearly delivered on this objective. Upon receiving their Problem Statements, the students immediately participated in background discussions and plant tours with their consultants. The remaining schedule for their one-month projects followed the impossibly aggressive Practice School timeline, which in the end wasn't impossible after all. The students learned how to swim at MSW in a way that was strongly enhanced by the availability of a factory, a laboratory, and a highly engaged and supportive cast of company staff.

Of the many lessons learned by the students, two stood out. The first: brevity. The students learned how to tighten both written and oral communications to ensure effective and impactful communications to the extremely busy MSW employees whose time was precious.

The second lesson was lifted directly from Steven Covey: seek first to understand and then to be understood. At times the students became upset and frustrated when things didn't make sense to them. But they soon learned that what may be confusing to them is clear to those in the factory. There's a reason, usually based on work done long ago, behind most everything that's done in a plant. Whether the reason is right or not is a separate question. The fact is that there is a reason. Sometimes it's obvious. Sometimes it's not. Sometimes it's written down. Sometimes it's not. The students learned to first understand the reason and, as best as possible, the rationale behind it. And only then should they design and run experiments, analyze data and propose solutions.

What a great real-world lesson for students to learn before beginning their own professional careers.