



### **The Lighter Side of Automation - BBB (Borrow)**

*How to Become an Instrument Engineer*

*Logical Thoughts at 4:00 AM*

*How to Become an Instrument Engineer Part 1.523*

By Gregory McMillan and Stanley Weiner (G. S. McWeiner)

Reviewed by Nick Sands

There is a series of books by Greg McMillan and Stan Weiner that capture the wit of two instrument engineers and the culture of the times. *How to Become and Instrument Engineer: the Making of a Prima Donna* was this reviewer's first ISA book and the start of a reading obsession. There are several other books in the series written by this pair of experts and illustrated by Ted Williams, including *Logical Thoughts at 4:00 am* and *How to Become an Instrument Engineer Part 1.523*. McMillan and Weiner and write together for ControlGlobal.com, among their many other activities. McMillan is an ISA fellow, a former "Control Engineer of the Year", one of the first inductees in to the "Process Control Hall of Fame", an affiliate professor at Washington University in St. Louis, and because he shares his 33 years of experience at Monsanto and Solutia, one of ISA's most prolific authors. This is neither the first nor the last review of one of McMillan's books. Weiner, also an ISA Fellow, is a retired Fellow from Monsanto and consultant from PC&E. He participated in the development of the S84 standard.

*How to Become an Instrument Engineer* was published in 1987. McMillan and Weiner humorously highlight areas of instrument engineering, a field unknown to most of the general population. There is advice for every instrument engineer, or automation professional, on how to deal with project managers, process engineers, and managers. Pearls of wit and wisdom include things like, "process engineers should be kept off balance by using as many electrical terms as possible". There is also advice on control valve and instrument selection, sprinkled with war stories and lessons learned.

*Logical Thoughts at 4:00am* dates to 1991. This book has less to say about instrument engineering and more to say about corporate culture and the imagination of instrument engineers. The commentary ranges from dreams of corporate success attributed to the engineers to the nightmare thoughts of engineers, from ethics to pie fights, and from Paul Revere to the three Bears. The subtitle appears to be true: A 99.99% Fact-Free Book. But it is 99% entertaining, especially to those who worked with instruments in the early 1990s.

*How to Become an Instrument Engineer part 1.523*, released in 1994, marked the return to the technical, but not too technical, tone of the original. And this time the authors recruited some assistants. There is excellent advice on how to improve your plant today through tuning, a testimonial on valve position control, and a review of mass flow meters mixed in with a visit from aliens, a cameo by Garth and Wayne, and a tribute to Stan Weiner.

Reading McMillan and Weiner's stories (again) illustrates how much has changed over the last twenty years, and how much remains the same. The series provides a glimpse into the corporate culture of the past and proof that instrument engineers have great imagination. These three books are still available from ISA at \$15 each. The best of the series, *A Funny Thing Happened on the Way to the Control Room*, is no longer available.