

Robert William Ford

Bulk Specialty Gas Supply Manager, Air Products & Chemicals, Inc.

“Once I see an opportunity to improve the customer’s gas supply. I’ll attack the problem with a team brainstorming session,” says Bob Ford. “Fortunately we have a lot of creative talent around here to come up with solutions. In this case, he’s reminiscing about his early work to upgrade quality systems of Air Products & Chemicals in the late 1980s, when he served as QC Manager in Hometown, PA, site of the world’s largest specialty gas plant. Ford’s level of daring, focus, and tenacity may account for his prowess as both a champion marksman and entrepreneur, who has spearheaded new developments and bold, large-scale projects over the course of his 26-year tenure at Air Products. Most recently, Ford made industry headlines by winning the contract to build the world’s first on-site bulk ammonia plant for Sanan, an LED fabricator in WuHu, China. (See our Q&A with Bob Ford about this project in the March/April 2011 issue of Gases & Instrumentation Magazine)

Ford thinks large, lives large, and is, well, just plain large. A hefty 6’4”, he is a gourmet, with a particular affection for Chinese food, which he learned to fully appreciate during his year living in Taiwan, when he served as his company’s Specialty Gas & Equipment Product Manager for Asia Business Development. “It’s nice to keep your palate entertained,” he notes, while swearing primary loyalty to his grandmother’s German cooking. Ford’s striking image is further enhanced by a beard adopted at 21 to signal his chosen identity as a “mountain man,” despite origins to the contrary.

Philly-born and bred, Ford set out to study chemical engineering at Pennsylvania State University. He switched his major to chemistry, then biology, after deciding that he wanted to work in the environmental business “due to my love of the outdoors (and life),” as he puts it. Ford worked as a commercial diver before completing his bachelor’s degree, then secured a job as an analytical chemist in an environmental laboratory, where his duties required him to use various trace analytical methodologies and instrumentation.

In his first five years with Air Products, Ford made an indelible mark with his innovations, leadership, and responsibilities in quality control. At the Hometown plant, he created a world-class lab, with analytical instrumentation that kept pace with the electronics industry’s emerging requirements for parts-per-billion range purity. Promoted to Quality Control Manager, he upgraded the quality systems to ASQC 90 format, the predecessor to ISO 9000, and served as chairman of the company’s work procedures subcommittee for all six of its specialty gas plants in the United States.

“I’m passionate about gas quality because I’m passionate about the customers,” Ford says, in explaining his propensity to strongly encourage instrument makers to meet the market’s evolving needs. In his own experience, he felt that his company benefitted by having “customers like AT&T, TI, and Motorola pushing us.” Spurred by such customers’ needs in the mid-1980s, Ford purchased six \$20,000 HP GCs which were then re-piped to provide the necessary pressure, temperature, and sample size required to perform chromatography in the gas phase. “We helped them out with the pneumatics to improve gas handling,” he says.

In 1989, Ford moved to Taiwan to work as an expatriate with Air Products’ joint

venture partner in the specialty gas business. He participated in the start-up of helium and hydrogen plants, as well as Quality and Safety upgrades of air separation, cylinder transfill and specialty gas plants. “We gave all of our folks shirts that read, ‘Safety + Quality = \$ALE\$.’ At first they laughed, but we went from last to first for spec gas in Taiwan,” recounts Ford.

With such flourishes, he demonstrated his ability to conceptualize broadly, while remaining focused on critical details, such as safety and cylinder composition. “We could make good stuff, but you have to put it into something,” Ford explains. “The compressed gas cylinders we were using had rust inside.” Relishing the chemistry—the whys of using Hastelloy with HCl and nickel for WF6, he expounds on the importance of selecting, passivating, and polishing cylinders to “assure the customer you aren’t taking his tool down.”

In 1993, Ford became Electronic Operations Manager for Asia, assuming a key role in the specification, design, construction and start of the specialty gas plants at Air Products Tsukuba, Japan, and Shihwa, Korean, in addition to the joint venture partner’s plant in Chupei Taiwan. Two years later, he was appointed to his current post as Bulk Specialty Gas Supply Manager in Air Products’ electronics division, where he has managed the company’s global Electronics Bulk Specialty Gas supply and equipment integrated business since inception.

Ford has relished the opportunity to create and to build these units, where he helped introduce new, patented ideas to Bulk Special Gas Supply (BSGS). The greatest professional challenge, he says, has been “maintaining a multi-disciplinary creative approach to all the challenges in the electronics industry.” Clearly, his efforts have paid off, as he has worked so successfully with design and project engineering groups, product management, marketing, financial analysis, fabrication, sales, operations and, above all, customers. By 2010, Air Products had installed more than 450 BSGS systems worldwide, or more than all of its competitors combined.

“We’ve got some pretty reactive stuff in the portfolio, and we sell this in bulk. I’m talking about bringing in bulk gases like HCl and TCS into their site, and dealing with all the key players, including the EH&S,” Ford recounts. “I’m working for the top companies in the world, and I can’t say, ‘I’ll get back to you after I contact my guru.’” The guru is all together present.