



Guest Editorial

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Pollution Prevention vs. Process Improvement

Let's talk about pollution prevention (P2). Did you roll your eyes? If you are a metal finisher, then chances are good that you did. The metal finishing industry has been inundated with P2 at both the federal and local levels.

Pollution prevention emphasizes the decrease of chemical discharge to the environment, a decrease in the use of toxic chemicals in processing, and an increase in the environmental conscience of the industry. These are all extremely important, but they do not take into consideration the process requirements. This is why many metal finishers are reluctant to install P2 technologies into their processes.

There are many technologies being manufactured today that can significantly aid in pollution prevention and chemical conservation. When these are described as P2 technologies, there is an instant stigmatism associated with them that implies that they will decrease the quality of the process and be costly to implement, resulting in an increased cost of the end product. In most cases, this is untrue. The most effective recovery and purification technologies can significantly improve the quality and consistency of metal finishing processes, while decreasing overall operating costs.

By purifying and extending the useful life of metal finishing solutions, the amounts of raw materials required can be drastically reduced. Minimizing the amounts of raw materials required for production can also minimize the reporting requirements for these materials.

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I know of many companies that have minimized—and some that have completely eliminated—all reporting, such as SARA-313. The elimination of this reporting burden has been almost priceless to these facilities.

Pollution prevention should not be synonymous with profit prevention. By continuously purifying and

recovering process chemistries, we can be assured that our processes will remain controlled. Our end products, therefore, will be repeatedly produced to the high degree of quality we demand. Pollution prevention should not be considered an expense, but rather an investment. P&SF

About the Author

Anthony D'Amato has been vice president of Zero Discharge Technologies, Inc., Chicopee, MA, since 1997. He has more than eight years' experience in the conceptual design of membrane separation systems, including diffusion dialysis, Donnan dialysis and electrodialysis. His experience includes systems design and integration into metal finishing processes with a focus on closed-loop operation.

He also spent five years as manager of a water treatment plant and plating bath treatment processes at a nickel plating jobshop. He has been involved in operating, troubleshooting and designing closed-loop rinsewater systems.

D'Amato holds a BS in chemical engineering from the University of Massachusetts at Lowell.