



# Reducing Rework With the *Lean and Clean Advantage*



## Metal Finishing Technologies, Inc.

Headquarters: Forestville, Connecticut  
Employs: 70

## Green Suppliers Network Findings

Annual Hazardous Chemical Reduction:  
400 pounds

Potential Annual Water Reduction:  
1.4 million gallons

## About the Green Suppliers Network

Working in collaboration with the U.S. Department of Commerce (DoC), the U.S. Environmental Protection Agency (EPA) established the Green Suppliers Network to help small and medium-sized manufacturers stay competitive and profitable while reducing their impact on the environment.

The Green Suppliers Network review took place in April 2007. The review team consisted of:

**CONNSTEP, Inc., a NIST MEP**  
**Judy Wlodarczyk**  
**Bill Caplan**



United States Environmental Protection Agency

Office of Pollution Prevention and Toxics  
(7409M)  
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**M**etal Finishing Technologies, Inc. (MFT) is a nationally recognized supplier of metal plated products for aerospace, automotive, electronic, hardware, marine, medical, metal stamping, and telecommunication sectors, occupying a 70,000-square-foot facility in Forestville, Connecticut. MFT serves the needs of diversified customers, including Chrysler, Ford, General Electric, General Motors, Pratt & Whitney, as well as the Department of Defense.

## The Situation:

Since 1998, MFT had realized that its automated rack zinc plating line was not performing to its optimal efficiency. The company estimated that the line was costing nearly \$80,000 in annual revenue due to high rates of rework, scrap, and waste. MFT Vice President of Operations Bruce Wheeler wanted to evaluate options to increase process line efficiency and reduce the rate of rework needed to meet customer demands.

MFT already had a working relationship with Linda Darveau of EPA's Region 1 Assistance and Pollution Prevention Office. As part of the assistance provided through her office, Darveau recommended that MFT investigate partnering with the Green Suppliers Network. "I really felt that the Green Suppliers Network's *Lean and Clean Advantage* could help improve MFT's business plan," Darveau said. "We've heard of great experiences from other metal finishers partnering with the program and they've successfully cut waste and saved money."

## The Solution:

Green Suppliers Network representatives Judy Wlodarczyk and Bill Caplan, of CONNSTEP, Inc., trained the MFT review team and together they completed current and future state value stream maps for the zinc plating line. With an existing rate of rework for the line at 15 percent, they confirmed that both scrap and rework contributed significantly to water, energy, and hazardous chemical usage and hazardous waste generation.

The review team set a goal to cut the amount of rework in half. They identified 17 improvements for the process line—13 of which could be implemented in less than one month. Implementing these improvements would reduce water usage by more than 120,000 gallons, as well as reduce solid hazardous chemicals used by 1,200 pounds and aqueous hazardous chemicals used by 130 gallons.

MFT is now headed in the right direction. The company recently removed an unnecessary step from the process, resulting in a reduction of 400 pounds of stripping chemicals and 2,750 gallons of water per year—a savings of about \$500. The company is currently exploring the possibility of replacing the 16 rinse dip tanks residing in MFT's metal plating operation with spray rinsing, which could reduce water use by more than 1 million gallons and save about \$6,000 per year.