

OMEGASONICS ON THE JOB

OMEGASONICS



EATON AEROSPACE: SINCE 1940

Jackson, Michigan is on I-94, halfway between Detroit and Kalamazoo. The Eaton Aerospace facility was founded here in 1940. World War II established the company's preeminence in fluid power technology as Aeroquip brand components went into America's military aircraft. Today, Eaton Aerospace continues the tradition, creating products that convey air, oil, water and Freon for aviation and marine applications. The Airbus 380, the world's largest passenger jet, uses assemblies made at the Jackson facility in its landing gear. America's new fighters, the F-22 Raptor and the F-35 JSF, have wings plumbed with Aeroquip brand fluid conveying products.



Manufacturing Engineer Bud Greener loads a precision-bent tube into an Omegasonics ultrasonic cleaning system.

BUSINESS TYPE:

- Hydraulic tubing systems for aviation and marine

PART/PRODUCT CLEANED:

- Metal tubes: stainless steel, carbon steel, titanium, aluminum, inconel®

SUBSTANCE(S) REMOVED:

- Lubricants
- Particles

OMEGASONICS SYSTEM USED:

- Omegasonics Super Pro
- Omegasonics Pro Plus
- Existing tanks retrofitted with Omegasonics components

MONEY/TIME SAVED:

- At least 20 hours of labor saved per week due to "hands-off" cleaning

TWISTS AND TURNS

Bud Greener is a Manufacturing Engineer at Eaton Aerospace in Jackson. He oversees the process that bends straight tubing into complex shapes that go into the world's most sophisticated aircraft. Stainless steel, carbon steel and titanium tubes arrive from mills in diameters ranging from 3/4 inch to 3 inches. Tube sections are cut to length and bent with a mandrel, a lubricated tool inserted within the tube to prevent kinking. Prior to the mandrel's use, dust and particles must often be cleaned out of the tubes. Post-bending cleaning is mandatory to remove oils and tube bending lubricants. Air is forced through the tubes for final cleaning and drying. "People are fussy about how their tubes look," said Bud, indicating the need for a clean, well-machined final product that meets internal quality standards.

SOLVING THE SOLVENT PROBLEM

For many years, Bud and his team cleaned tubing with mineral spirits and Stoddard solvent. The runoff went into a filtered tank, which a contractor would rotate. Stoddard solvent is a petroleum mixture with special storage, usage and disposal considerations. Eaton Aerospace decided to pursue an environmentally friendly solution to their cleaning needs.



The basket easily accommodates odd-shaped or small items.



The tube has been thoroughly cleaned inside and out in a hands-off process, saving precious and costly labor time.



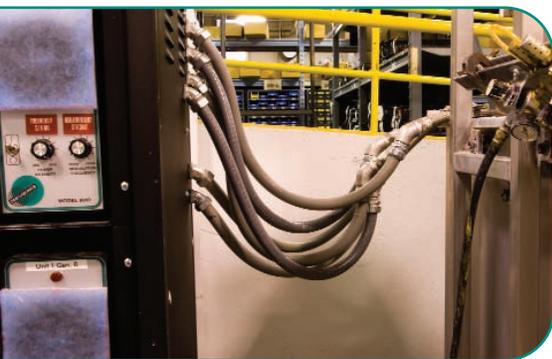
THE SWITCH TO OMEGASONICS

Bud and his supervisor John McKay, Manufacturing Manager of the Bending Area, attended the WESTEC show and discovered Omegasonics, the west coast's leading manufacturer of ultrasonic cleaning systems, serving companies world wide. He was particularly impressed with two models: the Omegasonics Super Pro and the Omegasonics Pro Plus, floor machines equipped with wheels for maximum flexibility in placement and shop layout. "Omegasonics wasn't the cheapest or the most expensive," said Bud. "They had an excellent product for the money and a commitment to customer service."

Eaton Aerospace's output includes oversized bent tubes which had dictated the acquisition of two stationary ultrasonic machines, made by a European manufacturer, with an approximate 300 gallon tank capacity. When the internal components of these units needed replacement, Bud came to Omegasonics. "The tanks were still in fine shape and suited our special requirements," explained Bud. "We were very pleased with the Omegasonics machines we were already using, so we asked them to retrofit our stationary units."



Omegasonics performed a retrofit on large, stationary ultrasonic tanks that Eaton Aerospace had bought from a European manufacturer.



Omegasonics' transducers and generators gave Eaton's cleaning systems a new lease on life.

Omegasonics consulted with Bud to determine specs for the components that would bring the stationary units back to life. Omegasonics supplied six transducer and generator sets per tank and generators. Eaton Aerospace installed the retrofit components and built the new control panel. "Omegasonics is very easy to work with, even from 2000 miles away," Bud said. "The retrofit and all other support needs have been handled in a very responsive manner."

TIME EQUALS MONEY

Omegasonics reduces the hand labor required to make a tube ready for shipment. "Before we went ultrasonic, we cleaned tubes manually," said Bud. "Now we just put them in the Omegasonics unit, adjust the settings, and walk away to do something else while they're being cleaned." Bud calculates that ultrasonic cleaning eliminates 5 to 10 minutes of hand labor per tube. Multiplied by the facility's output, this turns into a conservative 20 hours of saved labor per week. "Our plant can't afford to be slowed down or stopped. Omegasonics' dependability and service is part of our operational success," Bud confirmed. "As far as our employees and management are concerned, our Omegasonics units are here to stay. For any future needs, Omegasonics is our #1 choice."



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