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## **Sonobond Ultrasonics' Machinery: Used by Supply Pro to Assemble Booms for Gulf Oil Spill Cleanup**



# Sonobond's Ultrasonic Bonding Technology Played a Significant Role in Gulf Oil Cleanup



Forty percent of the booms used by BP in the Gulf Oil Spill were manufactured by Supply Pro of Houston, Texas. The inner polypropylene socks of these booms are assembled using SeamMaster SM86 High Profile machines. These Sonobond ultrasonic bonders create reliable seals that are strong enough to support an eight- or ten-fold increase in weight due to oil absorption.



Oil-absorbing polypropylene pillows by Supply Pro for hazard spill cleanup (top) and dimpled oil-absorbent products (below) are assembled with Sonobond's fast, dependable ultrasonic bonding machinery. This cost-effective equipment can be easily integrated into most production processes.

Sonobond's ultrasonic bonding technology was essential to the production of many of the oil-absorbing booms successfully used to clean up the 2010 Gulf oil spill, according to Melissa Alleman, vice president of Sonobond Ultrasonics. "For several years now, we've worked closely with Supply Pro, Inc. of Houston, Texas, and their Pro-Boom™ brand of absorbent booms. They are a leading provider of products for safely removing hazardous materials and for protecting workers during cleanups. Supply Pro, Inc. relies on our equipment for fast, dependable ultrasonic bonding of the materials in their ProSorbents™ line

of oil-absorbing pads, booms, and pillows. In fact, Supply Pro provided 40% of the booms used by BP during the spill. So we are pleased to say that Sonobond's ultrasonic machinery had a significant part in assembling the products so essential to cleaning up this disaster, as well as other hazardous incidents," she said.

### SAFE AND CLEAN ENVIRONMENT

Supply Pro, founded in 1996, is an internationally-known provider of absorbent products for hazard spill cleanup and the world's largest manufacturer of absorbent booms. It is capable of producing custom meltblown prod-

ucts of medical, technical, sorbent, and filtration grades with specifications ranging from 1/3 to 20 ounces per square yard. Their new, nonwoven line adds cotton and polyester capabilities beyond those of competitors. It was only natural that the company supplied many of the materials needed for cleaning up BP's Gulf oil spill using their ProSorbents pads, booms, and pompoms.

### SOLUTION-CENTERED APPROACH

In November 2006, company President and CEO, Harmon Fine, asked Phillip Barron to join Supply Pro as Director of Operations. Mr. Barron had over 40

years of manufacturing experience and a general familiarity with ultrasonic bonding. However, he was skeptical of the companies providing that technology.

"I thought all ultrasonic equipment suppliers were pretty much the same. Then I began talking with Sonobond. I came to realize that Melissa Alleman, their vice president, was committed to taking a team approach to problem solving. She and her associates considered themselves to be more than just vendors. They were willing to work with us to find solutions to the various issues we faced. I like this way of doing business because I've learned you need to have the backing of your suppliers to get the job done right. So we set to work finding ways their ultrasonic bonding equipment could be an asset to us. As a result of our many conversations with Melissa, we are now using several SM86 SeamMaster™ High Profile Ultrasonic Bonders and V20 Machine Builder's Modules. This equipment has become essential to the fast, dependable assembly of important parts of our top-quality ProSorbents product line," Mr. Barron said.

### ULTRASONIC ASSEMBLY

Supply Pro uses Sonobond's SM86 SeamMaster High Profile Ultrasonic Bonders to make the inner polypropylene sock for its booms, such as those so instrumental in absorbing and containing much of the oil spilled during the 2010 Gulf disaster.

During Supply Pro's production process, flat sheets of spunbond polypropylene material are folded over and run through the Sonobond bonders for sealing. They are then stuffed with highly absorbent polypropylene fill. The seals created by the ultrasonic bonders are as strong as the parent material. This is important because, by the time the product is disposed of, it may weigh eight or

ten times more than its original weight as a result of the materials absorbed. Once the socks are sealed and filled, they are placed into tough, pliable, polyester outer netting that is resistant to snags and debris. The booms created through this process can absorb and retain oils and oil-based liquids, such as lubricants, fuels, and cleaning agents. Supply Pro uses this same ultrasonic bonding technology to produce its absorbent pillows.

Mr. Barron went on to say: "Integrating the SM86 SeamMaster equipment into our production process was accomplished easily. We use these stand-alone machines on different assembly lines. They give us a strong, reliable bond without a brittle edge. This is superior to what we can get through standard sewing, heat-sealing, or induction heating. Sonobond machines are fast, reliable, and cost-effective."

### SEAMMASTER

The SM86 SeamMaster High Profile Ultrasonic Bonder is similar in appearance to a traditional sewing machine. However, it operates four times faster than conventional sewing machines and ten times faster than adhesive methods. This equipment has a high clearance between the wheel and the horn that is ideal for hand-guided operations with tight tolerances, as well as for working around curves.

The SeamMaster combines several labor-intensive operations into one pass that saves time, labor, and money. It provides quick, reliable sealing, sewing, and trimming without thread, glue, or other consumables. Manufacturers no longer need to concern themselves about needle and thread breakage, thread color changeover, or thread unraveling. Seams bonded by this machine are so perfectly fused and sealed that they can be used to help comply with OSHA's regulations for barrier seams.

Sonobond's SeamMaster has numer-

ous specialized uses in the textile, apparel, and engineered-fabrics industries. A variety of interchangeable pattern rollers are available for seaming, hemming, and embossing. A special fixture is available for producing pleated filters. Like other Sonobond machines, this equipment can be operated easily with only minimal training.

### ULTRASONIC BONDING

Supply Pro uses other Sonobond machinery, the V20 Machine Builder's Modules, to assemble its SMS 3-Layer Sorbents.

SMS (Spunbond/Meltblown/Spunbond) pads, rolls, and drum toppers are designed to have the strength and sorption capabilities to handle the most demanding industrial applications. SMS pads and rolls must be of lint-free construction for use around sensitive equipment and in clean rooms. Although the exact methodology used by Supply Pro is proprietary, Sonobond's V20 Machine Builder's Modules ultrasonically bond meltblown polypropylene between two layers of high tensile strength, non-linting, spunbond polypropylene. This takes just seconds and the resulting bond is strong and reliable. The same technology is used to make the company's diamond-patterned, dimpled products.

Prior to incorporating the Machine Builder's Modules into their assembly process, Supply Pro used induction-heated rollers. According to Phil Barron, the Sonobond system is much better. "Sonobond V20 units give us tighter controls on heat displacement and on consistency. They assure greater reliability of product and production," he said.

### FLEXIBLE ULTRASONIC CAPABILITY

Sonobond's Machine Builder's Modules are affordable and compact and have proven to be a popular choice

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among OEMs. They fulfill the same function as actuators and provide increased flexibility for automation applications where space is at a premium, as in filtration assembly. Available for 20 kHz or 35 kHz generators, they can also be equipped with distance measuring capabilities. The 20 kHz modules have power outputs to 3000 watts and a built-in leveling feature that permits precision alignment of perpendicularity. The 35 kHz modules have outputs of 900 watts. Both machines feature a rigid design for high pressure welding when needed. They also provide easy changeover for the converter/booster/horn. Additional features include full 360-degree rotation of the acoustic stack, a crossed roller slide for reliability, and adjustable flow controls to regulate travel speed.

### SONOBOND ADVANTAGE

According to Mr. Barron, Supply Pro is very pleased with the results they've been getting from using the SeamMaster machines and the Machine Builder's Modules. In fact, he is open to finding other applications where Sonobond technology can be of help to Supply Pro.

"There are several significant reasons that Sonobond ultrasonic bonding technology is such a big asset to us. For one thing, it is very cost-effective especially in the way it makes the production process faster and easier. The longer the equipment keeps running, the less costly it is for our company. You wouldn't believe the difficulties we had when we were still using heaters. Those problems

were more than a person would imagine. Now downtime is virtually not an issue. In addition, the quality of the bond is excellent, and we have strong technical support from Sonobond whenever we need it. The whole experience of incorporating their ultrasonic bonding machines into our manufacturing process has been very positive in every respect. They have allowed us to take better control of our line of booms, socks, pads, and pillows and to have more control over our own destiny," Mr. Barron said.

### FREE VIABILITY TEST

Even companies in similar fields have manufacturing or assembly requirements that are unique. So Sonobond offers a no-cost, no-obligation Ultrasonic Bonding Viability Test. Potential customers are invited to submit their nonwoven or synthetic fabrics to have sample bonds made. In this way, they can be certain which Sonobond ultrasonic bonding machine is right for a specific application.

Sonobond works closely with customers to make installation of its ultrasonic bonding equipment as seamless as possible. The company is fully dedicated to providing excellent customer service and exceptional technical support before, during, and after their equipment is installed.

In summarizing his relationship with Sonobond, Supply Pro's Phil Barron said, "I would rate my overall experience a strong 10! I've been very happy with all aspects of Sonobond, from the equipment we purchased to the customer



*The Sonobond SeamMaster SM86 High Profile Ultrasonic Bonder combines sealing, sewing, and trimming into one quick pass. This equipment is four times faster than conventional sewing machines and ten times faster than adhesive methods.*

service we've received. As I said earlier, they are team players. They do the research and hard work required to help us come up with solutions that enable us to achieve our goals. Sonobond has been—and continues to be—very professional in its approach."

### A RESPECTED LEADER

Sonobond enjoys a worldwide reputation for leadership in the application of ultrasonic welding and bonding technology. In 1960, the company—then known as AeroProjects—received the first patent ever awarded for ultrasonic metal welding. Over the intervening 51 years, Sonobond has pioneered the development of quality-engineered products for use by leading companies in the filtration, environmental, electrical, automotive, appliance, solar, aerospace, medical, ballistics, and other industries. PH

For more information about **Supply Pro** and its **ProSorbents** line of products visit:  
[www.prosorbents.com](http://www.prosorbents.com) or call 1-713-672-9080.

To learn more about **Sonobond's** ultrasonic bonding technology and their free, no-obligation Ultrasonic Bonding Viability Test, visit: [www.SonobondUltrasonics.com](http://www.SonobondUltrasonics.com) or call 1-800-323-1269.

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