



1191 McDermott Drive • West Chester, PA 19380
Phone: 610-696-4710 • Fax: 610-692-0674
Internet: www.SonobondUltrasonics.com
E-mail: Sales@SonobondUltrasonics.com

NEWS RELEASE

Contact: Janet Devine, President
610-696-4710

Ron Unthank, AAF International
502-637-0221

FOR IMMEDIATE RELEASE

Sonobond's ultrasonic welding equipment helps AmericanAirFilter® improve productivity and weld integrity for a variety of filter assemblies

WEST CHESTER, Pennsylvania – November 26, 2003 – Ultrasonic bonding units from Sonobond Ultrasonics are providing AmericanAirFilter with a fast, efficient assembly method to manufacture several types of commercial air filters. AAF International®, located in Louisville,



Sonobond's SeamMaster™ continuous bonder (above) assembles panel and cube filters for AmericanAirFilter® (above right).

Kentucky, provides filtration products for HVAC applications, dust collection, nuclear and bio-chemical products. According to Ron Unthank, Manager, AF-Manufacturing Engineering for AmericanAirFilter, ultrasonic equipment is used to manufacture 3 of their commercial air filters.

“We had previously used both radio frequency and impulse welding to assemble our ring panel filters. The ultrasonic method proved to be faster, which helps to maintain labor costs and improves production,” says Unthank.

(more...)

AmericanAirFilter® uses Sonobond's ultrasonic equipment – page 2

AmericanAirFilter uses Sonobond's SeamMaster continuous bonder to bond 2 layers of filter media 2-feet square to either side of a 23-inch-square metal frame, encasing the frame inside the filter media. The machinery creates a continuous, fused seal. The filter center is then spot welded using Sonobond's 20 kHz SureWeld plunge welder.

Radio frequency assembly can be “temperamental”

Ultrasonic technology is becoming widely used to assemble filter devices, replacing adhesives, stitching, as well as the radio frequency method, which is inconsistent and uses more energy than ultrasonics. “The RF process can be temperamental when working with filter media. And after upgrading our filter media recently, we discovered RF did not seal at all,” says Unthank. Ultrasonic equipment provided by Sonobond helps AmericanAirFilter achieve the high-quality bonds needed for their products, while keeping production costs in check.

How ultrasonics works

Sonobond's SeamMaster continuous bonding equipment channels high-frequency vibrations to the nonwoven filter media as it passes between the horn and the rotating pattern wheel, creating a rapid heat buildup at the material contact point. According to Janet Devine, President of Sonobond Ultrasonics, “Nonwovens are ideally suited for ultrasonic bonding, because of their high synthetic content. The ultrasonic energy causes the material to melt and fuse, which creates a strong bond, without the use of consumables such as thread or adhesives.” The same technology is utilized with Sonobond's SureWeld ultrasonic plunge welders, which AmericanAirFilter uses for spot welding applications. “We've found that filter manufacturers

(more...)

prefer ultrasonic assembly methods, because a minimal amount of material is taken up by the bond,” says Devine. “Since the sealed area does not absorb, it’s important to minimize the size of the welded area.”

In addition to ring panel filters, AmericanAirFilter uses ultrasonics to assemble commercial bag filters used for air filtration components. “The SeamMaster equipment cuts the filter pockets to size and also seals the filter on three sides” says Unthank. Before switching to ultrasonics, they had previously assembled the filter bags using a sewing machine process which, according to Unthank, is inferior to ultrasonics because the needle holes may compromise the weld integrity. “The ultrasonic assembly process is faster than machine stitching, and creates an uncompromised, continuous seal.”

Custom equipment assembles cube filters

One of AmericanAirFilter’s newest products, the cube filter, is assembled using a custom 2-headed plunge welder, specially designed by Sonobond engineers. “We needed to bond a wire ring along the perimeter of a 5-sided cube to make the opening sturdy.” says Unthank. “We had evaluated a traditional sewing method to assemble our cube filters, but it was not adopted, because ultrasonics worked so well with our other filter devices. It’s a much faster process, so it’s the only method we’ve used to assemble the cubes.” Says Devine, “The production specifications required a specialized unit with 2 welding heads to accommodate the size of the cube filter. The custom SureWeld spot welder provides a one-step process that produces a high quality weld and also cuts production time.”

(more...)

AmericanAirFilter® uses Sonobond's ultrasonic equipment – page 4

Sonobond Ultrasonics is a worldwide leader in the application of ultrasonic bonding technology. Sonobond's products bond textiles, metals, nonwovens and plastics in a variety of industries, including automotive, appliance, HVAC, apparel, aerospace, medical, electronic and electrical.

####