Less downtime, less scrap, less conveyor, and higher speeds all translate into higher efficiencies for SmithKline Beecham Consumer Healthcare. The Pittsburgh-based manufacturer of Tums®, Tums E•X® and Tums Ultra® Antacid/Calcium supplements, recently completed a packaging makeover on its popular products. A new induction sealer from Enercon figured prominently in the success of the project.

When SB decided it was time to redesign their TUMS package they also decided it was time to replace the large conduction sealing machines that were cumbersome and difficult to service. Jim Pitassi, packaging engineer with SB says, "The conduction units took up a lot of space, and they were hard to service. The maintenance guys had to crawl around them to make necessary changes."

In his quest for an induction sealing supplier, Pitassi decided to add Enercon to the team developing the new Tums package. "I liked Enercon’s strong, in-house research and development team, unlike R&D consultants that I found with some of the competition. Enercon also provided the commitment to work with us through and beyond completion of the project. Also, the induction sealer is a solid, compact unit."

Please see TUMS® page 2

SuperSeal™ Max awarded patent for unique design

Loaded with barrier breaking performance features the SuperSeal™ Max has won acclaim from users and earned a patent for its advanced design. The system seals at speeds in excess of 300 fpm conveyor speed, and is completely safe for washdown environments. Simple operation is guided by a microprocessor specifically designed to control, monitor and display all critical performance, inspection and operational criteria.

For ultimate control an optional RS485 interface is available as a powerful link to your process computer. Add a sealing head design that makes changeover extraordinarily easy and you have the most powerful air-cooled induction sealer on the market today.

For more information contact us at (262) 255-6070 or enews@enerconind.com
Sealing challenges

The design team developed an oval-shaped neck to top the rectangular bottle. The look mimics the rectangular shape of the traditional Tums bottle.

Induction sealing is traditionally used to seal containers with round openings. The “eddy currents” associated with induction sealing tend to travel in a circular motion making it difficult if not impossible to seal other shapes. Enercon customized its Compak Induction Sealing System with a special sealing head that generates an induction field that seals the oval-shaped opening.

The next hurdle was designing the snap-on feature of the cap, as it was crucial that the foil membrane liner contact the bottle evenly and firmly around its perimeter to produce a reliable seal every time. Most induction sealing involves screw caps, which offer the benefit of an even amount of pressure applied to the cap at all times. "With snap-on caps," Pitassi explains, "you have to ensure that the cap areas that receive pressure from the capper get enough pressure to hold the entire liner onto the bottle."

According to Mickey Miramonti, supervisor of mechanical services at the St. Louis plant, the cap design employs four locking lugs on each cap that hold the liner on firmly enough to create a solid seal. "We were continually adjusting things like the mold designs, how deep the cuts were for the lugs, how much pressure to apply, and the liner and cap thickness until we arrived at a design that worked," he says.

Pretium invested in two new cap lining machines that are currently dedicated to inserting the liner into the Tums caps. The oval liner is preprinted with the Tums logo. Pitassi calls the liner "a standard 3.3-mil foam/foil/PP liner." Pretium also purchased an Enercon Compak- the same system used at the SB facility-to randomly test the Tums packages.

Line efficiencies improved

The efficiency of the line has increased dramatically since the closure change, according to Miramonti. "There is a lot less downtime, which saves on manpower. And we produce less scrap. The conduction sealers punched the seals on the line, leaving waste, and they didn't always center the seal on the opening of the bottle, resulting in lost product. Dwell time for the conduction sealers was a rate-limiting factor on-line, so an additional conveyor belt was snaked to slow down the bottles for sealing."

"With the Enercon equipment, we can fill at regular line speeds. We don't lose filling speed, as with the other (conduction) unit."

-Mickey Miramonti
SmithKline Beecham

Tums®, Tums E•X® and Tums Ultra® are sold through drugstores, convenience stores, etc. nationwide. Pitassi says consumer feedback on the new design has been very positive. “Overall, we’re happy with the performance of the induction-sealing equipment and the many benefits it has brought to our operation.”

Contact us to receive a reprint of the complete Tums story as it appeared in Packaging World.

TUMS Package Design Partners

Bottle and Cap Supplier
Pretium Packaging, Hermann, MO

Moldmakers
Swan Industries, St. Louis, MO
R.J. Abramo Associates, Hollison, MA

Induction Sealing Equipment
Enercon Industries, Menomonee Falls, WI
There appears to be a misconception in the packaging industry concerning the relationship between the kilowatt ratings of induction sealing systems and sealing capability. While it is true that a higher kilowatt rating means a more powerful system, this doesn't necessarily result in higher sealing rates.

Kilowatt rating is only part of the story. The real secret to creating efficient and effective seals time-after-time is in the energy transfer from one part of the system to the other.

Let's look at some important factors involved in achieving satisfactory induction seals:

Sealing Head (Coil) Design:
All sealing heads are not created equal. There is both an art and a science involved in coil design to achieve efficient and effective power transfer from the power supply and into the inner seal foil. All suppliers of induction systems do not share that design capability. Enercon has pioneered and produced a greater variety of sealing heads for more applications than all of our competitors combined. If you do not have the correct coil design, increasing the power of the power supply only wastes energy and does not significantly improve consistent sealing.

Frequency:
Frequency is also a very important component in achieving consistently successful induction seals. Depending on the frequency of the sealing system, you may not be able to achieve complete wax melt when using two-piece, wax bonded innerseals.

At Enercon, we match the frequency to the application. You can be assured that if you're running 38mm dispensers, 53mm CT or 110mm CT closures your Enercon system will deliver the proper frequency for your application.

We believe that the emphasis should be on sealing performance and system efficiency rather than kilowatt ratings. Because of all the reasons above, it's not unusual for one of our lower kilowatt rated units to outperform a competitive unit with a higher kilowatt rating.

We are so confident that our sizing techniques are accurate that if we sell you a system that does not perform to the specifications you provided, we will upgrade the system to achieve consistent seals, or refund your money, no questions asked.

Don't be fooled by suppliers that try to convince you that kilowatts are the best way to rate induction sealers. Thousands of installations tell us that sealing head design and frequency are equally important factors to be considered.

New validation programs assist packagers
Enercon introduced its validation programs for its cap sealing product line in November at Pack Expo. The response from our customers has been overwhelmingly positive.

Customers have reported that the complete IQ, OQ, and PQ protocol documentation provided by Enercon has helped them meet their validation requirements in an economical and effective way.

In addition to the printed documentation and accompanying CD-Rom, Enercon also offers on-site engineering assistance and training.

For more information on our validation programs, e-mail us at enews@enerconind.com, call us at (262) 255-6070 or fax us the back page of the newsletter at (262) 255-7784.
The **e-jector** is Enercon's new microprocessor controlled container rejection system specifically designed for cap sealing applications.

Rated for speeds up to 800 fpm conveyor speed, the system can handle a wide range of container shapes and sizes.

The system easily plugs in to Enercon's cap inspection systems and mounts to virtually any conveyor. It works equally well with new and previously installed systems.

The pneumatic system allows the operator to set delay time and solenoid stroke length to meet a variety of application requirements.

**Contact us today for special introductory pricing**
enews@enerconind.com or (262) 255-6070

**Want more information? Fax us this page!**
262-255-7784

Write down the type of information you want in the space below and fax us this page. You can also use this page to update your mailing information.