Evolution of hot ware handling solutions

Erica Jaspers highlights Dura Temp’s latest hot ware handling developments for glass container production.

As technologies and consumer preferences evolve, so do hot ware handling solutions. The need for increased efficiency in glass production and brand awareness for consumers results in changes through the entire process of glass container production.

From product development to production to end-consumer, all the players must improve their processes and offerings to satisfy these changing conditions. Therefore, these external forces affect ware handling suppliers and the solutions they offer. Dura Temp Corp has adapted to the changing market conditions by adding products to its mix that assist glassmakers to achieve increased efficiency and support correct handling of shaped ware that differentiates one brand from another.

HIGH SPEED FOCUS
IS machines are becoming more efficient by producing more bottles/min. This improved technology requires ware handling suppliers to offer products and materials that can withstand higher temperatures, while maintaining characteristics that are key for successful hot ware handling.

While standard ware handling products still perform well in many applications, there are instances when these products will not work. For these cases, Dura Temp has developed its HW Series products, which perform exceptionally well during the production of beer or lighter-weight bottles on high-speed machines and during standard and high-speed production of heavier bottles. The HW Series products are a hybrid of two hot ware handling materials; DT-2, silicone composite and DT-60, high-temperature carbon composite. This combination of materials offers the high temperature capabilities of the DT-60 and the excellent lubricity of DT-2 material.

Standard graphite, carbon fibre-carbon and stainless steel braid materials, featuring high temperature capabilities, pose the risk of absorbing lubricants, which leads to thermal checking of the containers. DT-2 material is non-absorbent, which means if there is a build-up of lubricants on the pockets, they can be removed, cleaned and reinstalled for an extended service life. Also unlike some materials, the HW Series virtually eliminates the threat of scratching the containers. These products are offered for sweepout and transfer areas.

ROLLER WARE GUIDES
As laser coding technology at the hot end becomes more prominent, solutions for hot ware handling become more challenging. Correct spacing and straight-lining of containers on the conveyor is important during any production process but it is critical when a laser coding machine is installed at the hot end. If the containers are not exactly spaced and aligned as they pass the laser coding machine, the process is interrupted, causing downtime and making coding at the hot end virtually impossible.

Generally, strip-style ware guides are most often used in glass production. These use a strip of contact material to assist with straight-lining the containers. However, contacting containers with a strip of material may sometimes result in inaccurate spacing. To ensure the spacing remains accurate, Dura Temp developed the Roller Ware Guide. This guide consists of free-rotating rollers made of DT-2 material, mounted in a steel channel. Using a roller concept, the containers continue to move at the speed of the conveyor, with reduced probability of drag. The rollers offer 360° of contact surface and can be individually replaced, making the guide more economical.

While the standard-size Roller Ware Guide can be used in most container production, Dura Temp also offers

Universal lehr bar pocket that increases the wear life of contact material.

HW Series sweepout pockets for high-speed production lines.

Roller Ware Guide for standard containers and Mini-Roller Ware Guide for pharmaceutical, cosmetic and flaconnage containers.
a smaller version, designated as the Mini-Roller Ware Guide, for pharmaceutical, cosmetic and flaconnage ware.

CUSTOM-SHAPED BOTTLES
As consumer preferences are evolving back towards glass and companies wish to differentiate their products on the shelf and in consumers’ minds, glass manufacturers have developed the technology to produce individually shaped containers at high speeds. With this technology, the ware handling equipment must change as well.

Standard straight pockets and fingers do not provide the best handling because of ware stability issues, especially at high speeds. For improved handling on shaped ware, Dura Temp offers a line of custom solutions. Most incorporate pads of contact material on the sweepout and lehr bar pockets that are contoured to the shape of the bottle. The pads are contoured to touch the bottle in such a way as to provide maximum stability while moving it.

It also needs to be taken into consideration if there is any embossing on the bottle so it does not become damaged by the contact material. Handling a container with individual contours and embossings can be even more challenging than handling a standard round beer or wine bottle.

DURABLE PRODUCTS
In a competitive marketplace, glass manufacturers strive to increase pack rates, reduce down time and costs and become more efficient to remain a player in the industry. To achieve these goals, glassmakers are continuously searching for durable products that can withstand the harsh hot end conditions in a glass factory.

The challenge is to find products with a good mix of high strength and low weight, at a reasonable cost. To assist glassmakers with this objective in the annealing lehr area, Dura Temp has designed its Universal Lehr Bar Pocket. The stainless steel pocket has a weight similar to aluminium pockets, yet it is superior in strength. It will not bend or crush as easily as aluminium pockets and therefore, will also protect contact material during a crash. In addition, this pocket was designed with a reduced profile to increase the wear life of the contact material. Reducing the need to change broken pockets and extending the service life of the contact material allows glassmakers to increase efficiency at the hot end.

Dura Temp believes it is important to support the changing needs of glass manufacturers through a commitment to research and development. Technologies change daily, consumer preferences evolve over time and it is critical that ware handling suppliers offer solutions to accommodate the changing marketplace.

ABOUT THE AUTHOR:
Erica Jaspers is Sales and Marketing Manager at Dura Temp

FURTHER INFORMATION:
Dura Temp Corp, Holland, Ohio, USA
tel: +1 419 866 4348
email: sales@duratemp.corp
web: www.duratemp.corp