In the Spotlight

Packaging et al

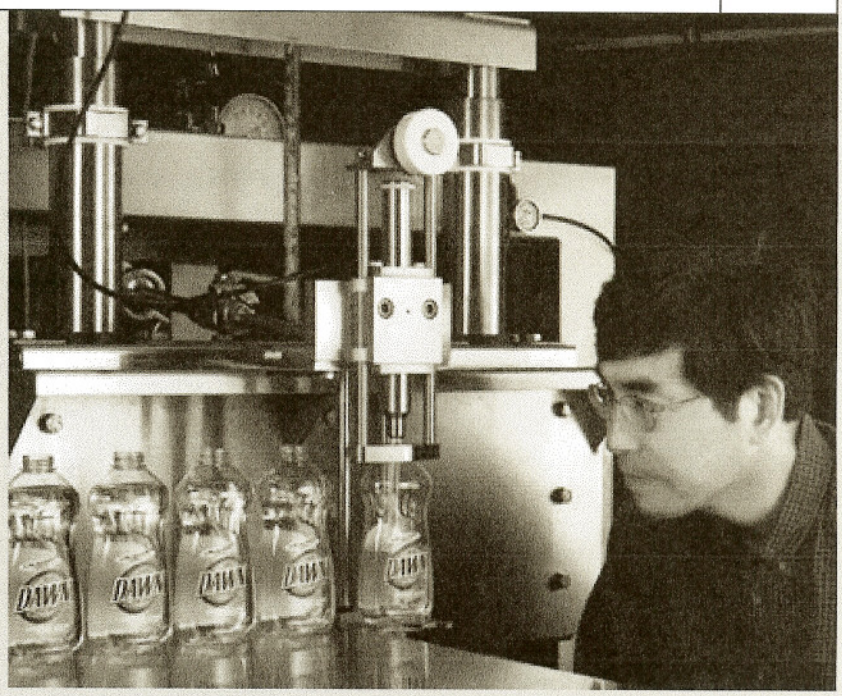
Worldwide, the packaging industry has an annual turnover of around 400 billion euros. Manufacturers have to rely more and more on the state-of-the art technologies and services provided by the equipment industry in order to be convincing at the point of sale. The KHS Group has long since acquired a reputation of being an innovative, customer-oriented company focusing on packaging for the food and non-food as well as cosmetics industries. The KHS journal describes a cross section of KHS products and services from around the globe.

PROCTER & GAMBLE:

New, No-Drip Filling Valve

+ Three complete filling and packaging lines for Procter & Gamble + New, absolutely drip-free filling valve + First market presence in the US detergent and body care product industry +

Worldwide, consumers use brand products from Procter & Gamble two billion times every day. The reasons are clear: a huge variety of 300 quality brands including products such as hair and beauty care, textile and domestic care, hygiene, baby care, health care, pet food, and snacks, offers customers plenty of choice. Procter & Gamble ordered three complete KHS filling and packaging systems for their plant in Kansas, U.S.A. The new equipment also solved an old problem the company had been facing, i.e. the filler is equipped with a new, absolutely drip-free filling valve. Beginning August 2005, the innovative system will be used to fill the Dawn, Ivory and Joy brands of Procter & Gamble dish detergents, and at a later stage also shampoo and various domestic and hygiene care products. In the past, the company was faced with the problem of liquid adhesion to the filling tube, particularly when filling of viscous products, and possible dripping onto the container with the result of soiled sur-



Kecheng Ding, Filling Valve Designer for the Research & Development Group of KHS, Inc.: "The new, no-drip filling valve for detergent bottles from Procter & Gamble is compelling."

faces and labeling problems. Furthermore, dripping also means loss of product. The new volumetric filling valve is the first detergent application from the KHS Group, which has traditionally focused on the beverage industry. The no-drip valve was developed by Kecheng Ding, director for filling valve design at KHS, Inc. "Other manufacturers have tried various anti-drip solutions, for example retention of liquids my means of the surface tension technique combined with a screen or a plastic plug with holes," Kecheng Ding explains. "However, these solutions are problematic, because air is mixed in with the product during filling and Procter & Gamble requires a product stream without inclusions. Moreover, the fill process can be slowed down if the holes are too small," Kecheng Ding adds. And ultimately, the screens and plugs have to be replaced frequently, depending on the viscosity of the product. The new valve solution, in contrast, is universally applicable.

All three volumetric fillers with their 60 valves and 12 capping heads have a nominal capacity of 24,000 740-milliliter bottles per hour. "In practical operation we expect the filling performance to be even higher," says Kecheng Ding.

Advantages of the KHS valve

* Flexible and easy to service
* Works via mechanical product seal and positive product separation
* At the same time eliminates potential dripping
* Suitable for a wide viscosity range (from water to rinsing solutions)
* More gentle and precise filling. The filling valves currently used by Procter & Gamble have a long stroke, which may cause overfilling and pressure shocks leading to splashing.

Characteristics of the KHS valve

* Shorter stroke, leading to gentler filling versus other valve designs
* Filling at a bowl pressure of 0.75 bars instead of the usual 2 to 2.5 bars
* Very high filling level accuracy
* Reduced product loss

The short-stroke valve protects the valve seat from damage. The result is longer service life.

Very easy to maintain. The valve housing is made of stainless steel and the internal parts are made of plastic.

The KHS system is rugged and dimensionally stable – even at high temperatures during CIP processes, operating with high-temperature steam. Exceptionally easy to service: a special leakage hole facilitates detection of gasket failures. The advantage: the valve does not have to be dismantled.

Summary

The new, absolutely drip-free valve from KHS raises hopes – even beyond the health, beauty, and beverage sectors – for engine oils for instance. The versatility offered by the valve paired with its numerous advantages helps KHS to open up new markets.

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