

Heye Newsletter I, 2019

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INTRODUCTION

Dear customers and friends,

I hope that you all have enjoyed a good holiday time and have come back in good health, high spirits and motivation. Living in the northern hemisphere as we do, our happy memories of a warm summer now bring us new energy and prepare us for future challenges. We at Heye are always keen on responding to your glass manufacturer's requirements, whether with new technology solutions or production

HEYE STATUS LIGHTING: SAFETY AND LIFE CYCLE BENEFITS

The latest generation of IS machines can be equipped with sophisticated status lighting to provide enhanced safety, while also increasing mould life expectancy. The status lighting is a coloured RGB-section lighting that colour changes depending on the current status of a section. In addition to providing pure white light illumination for the blank side, Heye International offers this colour status lighting for its latest generation of [SpeedLine IS machines](#). This colour status lighting has been supplemented by a further function that, in addition to its security benefits, also significantly increases the usefulness of this option. This enhancement relates to the equipment's lubrication (swabbing) cycle. Effectively, the lighting is mounted in the blank side control panel and in its simplest form (white light only), illuminates the section for work that needs to be undertaken there.

support in demanding situations. So we are ready to restart daily work on the “smart road” – convince yourself!

Yours,
Dirk Pörtner

MESSAGE IN A BOTTLE



Did you know?

On January 21, 2018, an over 131 years old bottle post was discovered on the beach of Wedge Island, north of Perth in Australia. Inside the bottle was a printed form in German language, addressed to the "Seewarte in Hamburg" (hydrographic office). As the handwriting was partially readable, the date could be set to June 12, 1886.

According to research by the Western Australia Museum in Perth, it was thrown aboard the German cargo ship “Paula” into the Indian Ocean to explore ocean currents as part of a long-standing project of the Seewarte. By handwriting comparison with the logbook, the ship’s captain O. Diekmann was determined as the author. The

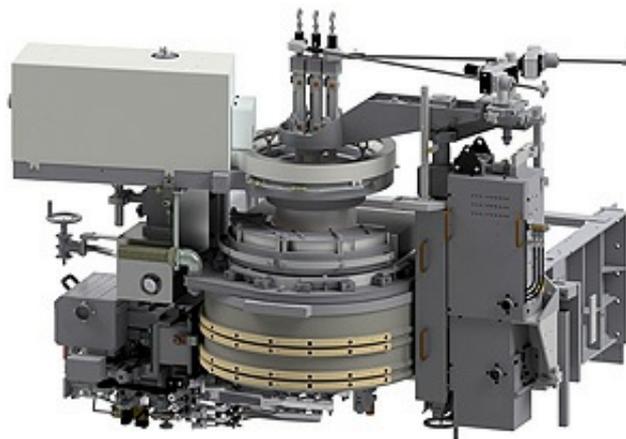
Initially, the coloured RGB status lighting with an option for white lighting took into account the opportunity to increase operator safety. With the coloured lighting, the operator can visually identify the different operating states of the machine/section.

Without illumination, the section is in normal production mode. By a further defined assignment of different colours, the operator is shown further possible operating states. This includes:

- Section stop activated.
- Start phase (reset actuated).
- Start up and operation without gobs.
- Special ‘cold blank mould’ programme.
- No communication between status lighting and control (failure).
- Special ‘lubrication cycle’ programme.

The ‘lubrication cycle’ function gives the operator additional support when carrying out daily work routines. By blinking in an assigned colour, the function makes it visible that the lubrication of the blank and/or the neckring is necessary after a defined time interval (after certain minutes or after a certain number of processed gobs).

BENEFITS OF COMPREHENSIVE CONCEPT SOLUTIONS



When a customer asked for Heye’s assistance to produce one million long neck beer bottles per day on a 20 section TG tandem machine, significant demands were placed on the IS machine with regard to performance reliability and short downtimes. In addition, the project placed highest demands on the ware handling equipment between the IS machine and annealing Lehr. Heye met these [transport challenges](#) with a combination of adjustable dead plate cooling, modern three-axes servo pushers, a new high performance servo ware transfer and an efficient and stable four-axis servo Lehr loader. With these co-ordinated

opening of the bottle, which is only 7 mm wide, and the thick glass protected the paper well from environmental influences and made it possible to create a microenvironment inside the bottle, which supported the long-term preservation of the paper. The oldest bottle post found so far was 108 years old.

components, the Heye team was able to successfully fulfill the customer's requirements.

Apart from the challenges posed by this case study, however, Heye recognises the industry-wide demand for increased daily tonnages, even with machines of lower section numbers. This in turn places additional demands on the performance of the feeder, the feeder mechanics and its controls.

Only recently, a daily output of 140-150 tonnes was considered high but today, 180 tonnes and above are standard. Via the introduction of the type 575 feeder (capable of 200 tonnes/day performance levels), Heye has responded fully to customer and market demand. The design incorporates proven features from earlier feeder types, including [dual motor shears](#), [servo plunger](#), [rotor mechanism](#) and [rotating tube](#). In this arrangement, the control of these feeder mechanisms offers established options such as assortment production, where gobs of different weights can be produced on a single IS machine simultaneously. With this option, weight differences of 215g have already been achieved in containers weighing 825g and 610g, without any gobs lost.

The conditions outlined above further demonstrate the importance of pursuing a perfectly co-ordinated concept, rather than individual machinery in isolation. As a result, the glass container industry's increased requirements for enhanced daily tonnages and flexibility can be achieved.

NNPB PLUNGER DESIGN AT ITS BEST: CO-OPERATION BENEFITS



Apart from access to the necessary knowhow, glass container quality is only as good as the quality of equipment and materials employed. When it comes to the design of moulds and plungers for new containers, Heye works together closely with its sister company [UniMould](#), which has considerable long-term experience in the manufacture of NNPB/PB plungers, plugs and cooling tubes. Several years ago, UniMould developed a special and well-proven plunger coating. Together with the high quality mould and plunger material, this coating optimizes the impact and internal pressure condition of the container. Damage to a container's internal surface is avoided by this special plunger material and coating combination. "This co-operation has resulted in a market leadership position with regard to the performance and stability of glass containers" says Knut Prasuhn, Head

of the Service Department at Heye International. “Our customers benefit from this ‘one-stop’ service and co-operation, generating a wide diversity of valuable experience.”

Based at Obernkirchen, Germany, UniMould GmbH has over 60 years’ experience in the production of accessories for the glass packaging industry. The company delivers quality and service that exceed customer expectations, in a market where quality standards are constantly raised and surpassed. UniMould continually invests in the latest machine tool technology to deliver the highest quality components possible, on time and at a competitive price.



Convince yourself of the good quality and short delivery times – put us to the test! We are looking forward!

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**EFFICIENCY OF SHORT JOB RUNS:
MULTI WEIGHT PRODUCTION**



The production of a small quantity of different products has always been an issue for the container glass industry. The IS machine had to be completely stopped and reconfigured. In addition, the whole production run had to be turned over to the other article and more moulds than necessary had to

be purchased for these low-volume items. Downtime was very costly and production efficiency suffered greatly. Today, gobs of different weights can efficiently be produced on the same IS machine simultaneously.

Since the development and the successful market launch of the [Heye Multi Weight](#) solution in 2008 (previously also called “assortment production”), the market demands have continued to increase. Heye successfully met the customers’ requirements by continuously developing this product. The multi weight solution masters a variety of scenarios applied by container manufacturers and makes production much more efficient than it was possible prior to the introduction of this technique.

UNIQUE ADVANTAGES:

The system finds practical application both in the sampling of new containers and in the production of smaller quantities, which are considerably less expensive when running assortment production. In the past, sampling procedures counteracted yields of an entire production line for hours or even for an entire shift. With the use of this latest technique it is possible to carry out the sampling of the new article on one or two sections while keeping the remaining sections run in normal production routine. Not one single gob is being wasted nor rejected.

The outstanding benefit of this multi weight technology: Efficiency of short job runs. In general, short job runs are produced when the consumer requests a high-end article (i.e. perfume bottles). It is evident that common bottles as e.g. for beer or water reach a much wider market in quantity compared to more luxury filling materials such as spirits or perfume. Consequently, multi weight technology makes production particularly interesting for the manufacturer not only for sampling procedures but above all when it comes to the request of cost-effective production of these smaller quantities.

In general, assortment production can be realized at a weight difference of 10% to 20%. The lower the basic weight, the better to keep this figure. In the past, multi weight productions with 280 g and 304 g as well as 256 g and 280 g have successfully been realized. Today, due to constant development of the software in cooperation with different customers, assortment production with weight differences of over 200 g are possible under certain conditions (e.g. 610 g and 825 g).



HEYE WINS INNOVATION AWARD FOR SWABBING ROBOT

The [Heye swabbing robot](#) is a milestone in automation and innovation at the glassworks. With more than 50 years of expertise of Heye International and its glass experts, this application for industrial container glass manufacturing was launched. Heye International is pleased to have taken third place in the prize awarded by the district of Schaumburg. It is already the third time that Heye wins this prize.

Economic impact and use

In most applications, the new robot swabs the moulds at the individual section "on the fly", i.e. during operation. The gob loading does not have to be interrupted, which increases the productivity by up to 3% and thus the economic efficiency of the machine considerably. In addition, the robot has an innovative spray head, which brings the lubricant exactly where needed, exactly timed and in the required amount. The robot can dose the lubricant much more accurately than a machine operator. This lowers operating costs and protects the environment. Records have shown that the robot consumes up to 75% less lubricant than a machine operator during manual swabbing. The even and consistent amount of lubrication and application thickness as well as the specified swabbing areas ensure a repeatable production process. The machine operator has more time to devote himself to production optimization in other areas. Less critical defects and a longer mould life time have been experienced during the first years of commercial use. After all, the return on investment (ROI) is about a maximum of two years, depending on produced container.



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