



Emhart Glass: 100 YEARS IN CONTAINER GLASS MACHINERY

100

1912 – 2012

A centenary is a very long time to be working in any sector and industry. And to be not only working in the industry, but being the forerunner and creator of – for example – the IS ('individual section') machine for automatically manufacturing glass containers in 1924 is even more incredible. In this article we take a look at how Emhart Glass has developed over these past 100 years, with the introduction of two new products to its vast range.

CELEBRATING A CENTENARY

Emhart Glass, the leading supplier of machines, controls, and parts to the glass container industry worldwide, is celebrating its centenary year in 2012. The company, in fact, dates back to 1912, when Hartford-Fairmont was founded in Hartford, Connecticut by pioneering engi-

neers Bill Lorenz, William Honiss and Karl Peiler. The company was created to market Peiler's revolutionary design for the paddle-gob feeder, which used gravity to automatically feed molten glass into moulds. Its successors went on to become the industry standard for glass feeding.

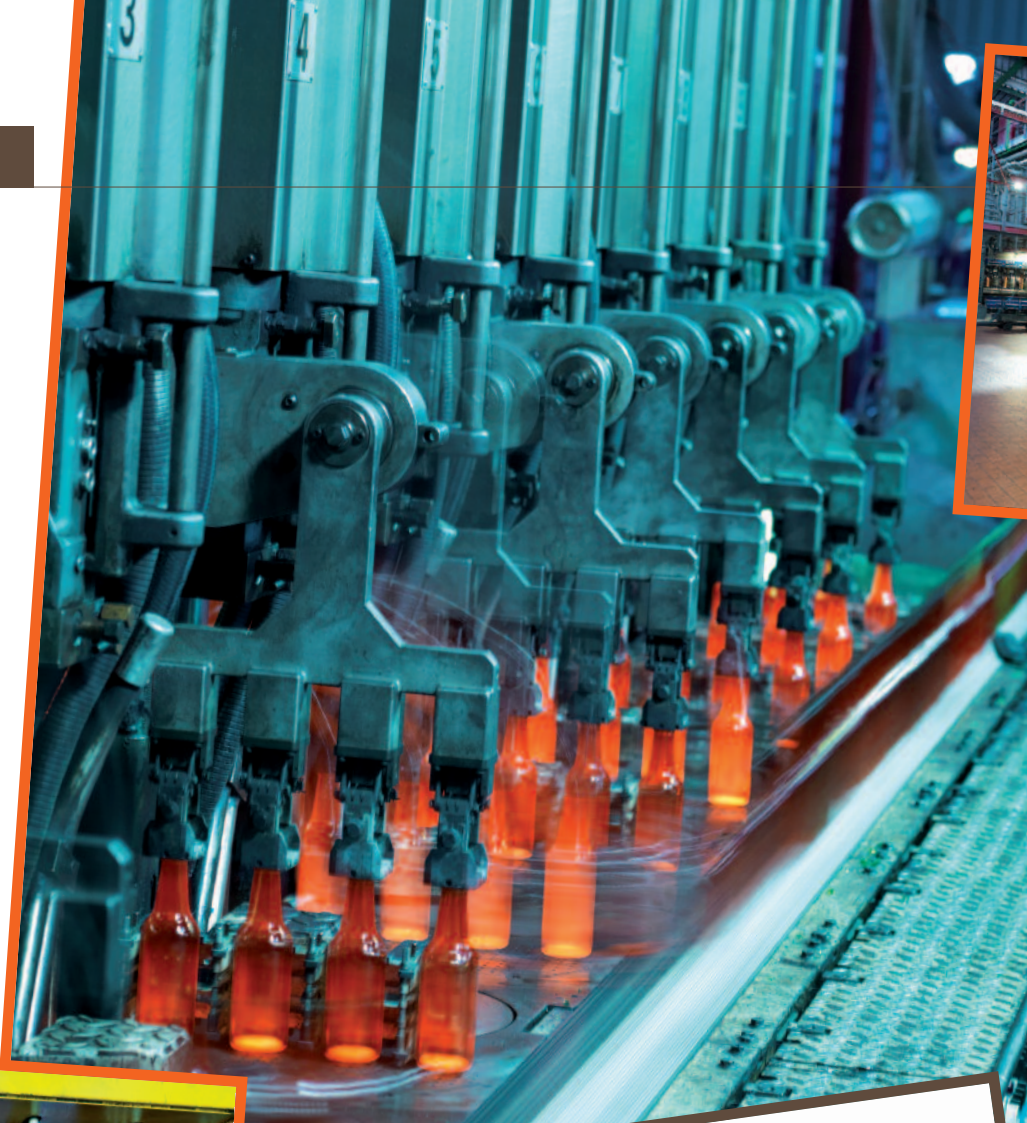
In 1924, the firm became Hartford-Empire and patented the

IS (individual section) machine for automatically manufacturing glass containers. This too became an industry standard, quickly displacing rival technologies, and was continuously developed and refined over the following decades. Incredibly, the core technologies developed by Hartford-Empire for feeding and glass-forming remain essentially unchanged to this day.

ANNIVERSARY

Hartford-Empire developed quickly, selling and licensing its machines throughout the US and Europe. The 1940s saw the firm's first moves into automated inspection, as well as the first of many acquisitions that would turn the company into a major industrial group.

Renaming itself Emhart and later Emhart Glass, the firm built a Europe-wide sales and manufacturing operation from the 1950s on, with plants and branches in Switzerland, Germany, Italy and the United Kingdom. The acquisition of Swedish manufacturer Sundsvalls Verkstäder in 1952 was an important milestone in these globalization efforts. During the 1970s and 1980s, it was followed by the first sales and service operations in the Far East. In 1987, the group transferred its headquarters to Switzerland.



In recent years, Emhart Glass has launched NIS, the world's first completely servoelectric glass-making technology, and FlexIS, the glass industry's first fully integrated control system. A Research Centre was built in Windsor in 2007, including a fully functional

glass plant, and a state-of-the-art manufacturing facility opened in Johor Bahru, Malaysia, in the following year.

In 2011, Emhart Glass struck a landmark joint venture with Shandong Sanjin Glass Machinery Co., China's undisputed leader for glass machin-





ery. 'I'm very proud to be part of a company with such a long and impressive history,' comments Martin Jetter, Emhart Glass' President. "It's humbling to look back at what our predecessors achieved – they had such brilliant ideas, and they built up such a strong and enduring business too. Our challenge today is to live up to their legacy by serving our customers with new ways to improve the technologies we've inherited – and to add to them with innovations of our own, for the benefit of our customers and the entire glass industry."

ISIS WALL THICKNESS GAUGE

Emhart Glass' gauge option for the ISIS Dimensional Gauge is an integral part of its MiniLab Glass Container Measurement System. This new option provides the ability for automated mould-correlated wall thickness measurement of glass containers on a sampling basis.

The Wall Thickness Gauge uses a

single non-contact chromatic sensor with a 10 m spot size to measure the wall thickness of glass containers from 1 to 10mm with a repeatability of $\pm 0.15\text{mm}$. A servo-controlled linear slide automatically keeps the chromatic sensor at optimal distance from the surface of round and non-round containers during the entire measurement sequence.

Once installed and calibrated, the Wall Thickness Gauge does not require any mechanical adjustment. When creating a job, the operator simply specifies the distance from the top or base of the container the different wall thickness measurements should be performed. Up to nine locations can be specified, each with different diameter and min/max limit values. The ISIS elevator automatically positions the container in front of the sensor at the specified locations. The wall thickness is measured 360 degrees around the container at each location.

The Wall Thickness Gauge is available as option on new ISIS machines and as a field upgrade for any machine already in operation.

NEW GENERATION NECK RING MECHANISM

Emhart Glass' new Neck Ring Mechanisms feature closing forces increased by 20 per cent, optimized airflow for improved synchronisation motion and a fine-thread screw for greater T-nut clamping force.

The tapered pin assembly has been replaced with a strong, standardised retaining ring assembly.

The new design offers higher clamping force for the Neck Ring Holder Arm, and opens up the possibility of higher revert speeds. It allows for balanced opening of right and left Neck Ring Cylinders, leading to fewer finish checks. The

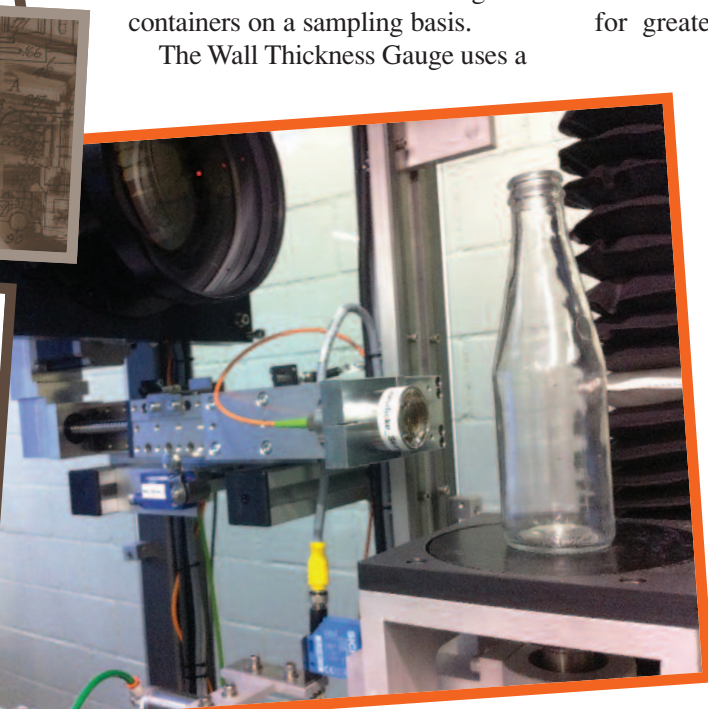
increased stiffness also enables improved precision, and the unit as a whole is far easier to service.

The Neck Ring Mechanism is fully interchangeable with existing mechanisms. Old and new versions of the mechanism can be operated side by side on the same machine. However, many of the individual parts within the new mechanism are not compatible with earlier versions.



The new mechanism has the part number 191-5149-11. It is fully compatible with the existing Neck Ring numbered 19-5149-9, the production of which will be discontinued.

A Quick Change version has also been developed, offering the same feature set. It will bear the part number 191-5149-12 (replacing 191-5149-10) and will be launched in the third quarter of 2012. ■



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EMHART GLASS SA

Hinterbergstrasse 22
Postfach 2251
CH-6330 Cham 2
Switzerland

www.emhartglass.com