

Error prevention in bottle manufacture

by Kay Barton

Air Logic Power Systems (ALPS), an engineering and manufacturing company headquartered in Milwaukee, Wisconsin, USA, have specialised exclusively in equipment to detect defects in containers and bottles. On the exhibition stand at the NPE I met up with Mr Scott D. Heins, Director of Sales & Marketing and Mr Jack Hughes, Marketing Coordinator. Their on-site highlight is the 8-station Speed-Glider, a new linear leak tester.

A brief flashback. The company, which was set up in 1974, developed its first leak testing machine in 1978; the first high speed system for HDPE plastic containers came along in 1985. During the 1990s further developments in electronic technology followed and, from 2000 on, greater concentration on the changing packaging trend and high speed applications in PET. In 2000 ALPS became a part of TASI Group which, since the beginning of the 1980s, has been active in the test and inspection equipment sector as well as equipment for product measurement. A total of ten companies in the USA, Europe and Asia form the TASI Group.

“Our success”, Mr Heins is convinced, “lies in the fact that we focus exclusively on test machinery. As things stand at the moment, we have supplied around 2600 leak testing machines to national and international customers. This corresponds to a total quantity of more than 50 billion bottles and containers that our machines inspect annually. About half of these are PET bottle applications”.

ALPS' experience in test equipment extends to all bottle sizes, shapes and materials, from 3ml to 20 litres, from the beverages, food and non-food sectors.

“One of the major markets started in the PET hot fill sector and checking for micro-holes. One ever-present problem was bottles that go through the entire filling process without these small defects being found. This is where our high speed rotary leak testers come in. Over the years we have also been focussing on developing a full range of products for high, medium and low speeds. In

the rotary sector we are offering leak testers with 4 to 30 stations”. ALPS is also showcasing its NextGen Rotary Leak Tester on the stand. Currently, however, the company is selling more machines from the linear leak tester series.

The Speed Glider, which ALPS claims to be the world's fastest linear leak tester, can be seen in action. The measuring unit, with up to eight heads, is capable of managing up to 500 small-format bottles/containers a minute. The majority of activities today are in the medium and low speed lines sectors. Here ALPS is concentrating on extending the capacity of linear test machines.

“Visual testing for PET bottles, as is quite common around the world, is a valuable tool but not fully effective for detection of the most critical defects. We see a growing trend for leak testing in all sectors as a simple and reliable means to detect defects that cannot be reliably found using other means. Market trends in our favour include the drive to zero defects, lightweighting and the use of rPET. In addition to micro-holes, our technology is also able to identify defects in the area of the neck and/or seal. We use a very low measuring pressure in our machines to maximise the sensitivity for seal and body leak detection”.

ALPS' customer base incorporates all the well-known blow moulding companies and products without exception. One forecast for the company's future predicts major potential in Asia due to inevitable increases in automation and quality demands as the markets mature. “Our business will grow there as the markets evolve

towards quality standards similar to those in the USA or Europe. In the interests of improving presence and service”, Mr Heins goes on. TASI Group is combining the activities of the Advanced Package Test and Inspection Division with ALPS and the other two companies from this section of the Group (Bonfiglioli Engineering and Sepha) this year and merging the sales and service teams. Consideration is also being given, as part of a global expansion exercise, to a range of different production locations in the future. Currently ALPS offers service from its facility for the USA. Europe is serviced by the group companies and, from this year, a further local service facility will be inaugurated in Asia. “A global presence is what we want and this is what we are working on just at present”.

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Jack Hughes and Scott D. Heins in front of the Speed Glider