

K 2019 – A new look and a close look from Aisa



If Swiss firm **Aisa** looks a little different at this K show, then that is because the company has rebranded and launched a new unit dedicated to inspection.

Stretching the Aisa name across all of the divisions, the company now has Aisa Machinery, Aisa Services, Aisa Packaging, Aisa Coating, and since January, Aisa Inspection.

“We have launched this for our machines to enable checking inline for various defects, such as thickness or orientation,” said Joachim Sander, marketing director at SIH Group, which owns Aisa. “We have developed our own software and work with Artificial Intelligence (AI) and algorithms.”

Aisa **Inspection**’s Q-Equipment can be customised to detect specific deviations in early stages of production, with options including thickness measurement, visual inspection of surface aesthetics, orientation, cap presence and position, and control of geometric features. It can also be fitted to other OEM systems.

During the show Aisa is demonstrating a SAESA 120 laminate **tube** machine with sideseam inspection, working in-line with a 5-micron variation. Calling it a simple gauge, Sander explains that the intelligence is in the algorithm.

“We have several systems in field testing. Checking in-line is a game changer for the tube industry,” he added.

The circular economy is of course a major theme of this K show and Aisa is demonstrating its work with Colgate-Palmolive, as the Swiss firm supplies about 90 per cent of Colgate-Palmolive’s global tube production machinery (exceptions are in the US and India). Earlier this year the brand finalised the design of a recyclable toothpaste tube that it will debut under the

Tom's of Maine brand in the US next year, with a global rollout to follow. The company plans to fully convert to recyclable tubes by 2025 and wants the rest of the industry to follow suit. Traditional toothpaste tubes utilise sheets of plastics laminate that are often sandwiched around aluminium. The layers are pressed together and become difficult to recycle. Colgate is targeting the HDPE waste stream with its solution, said Sander.

"The laminate is an aluminium-free PBL/EVOH and the tube has a PP cap and then a shoulder and insert. It can be separated during the recycling process," he said.

HDPE is a challenging material for ultra-thin laminate sheets as it is rigid, so Colgate had to test a variety of different combinations using different recipes. Although there will be small percentages of materials such as EVOH for performance, these are not at a level that would disrupt the recycling process.

Sander highlighted another innovative tube on display from Kim Pai Thailand, which features metallised PE or PET on a mono-material base. As this is a thin coating, it is not considered a problem for recycling.

The issue of sustainability is a multi-faceted debate, and Sander pointed to a promotional poster that claims a 30 per cent weight saving when switching from bottles to tubes. "We are saving material, which is good for the environment, but then the recyclers say it is too light."

This tube sources its material from Germany's Yellow Bag

Another eye-catching tube comes from the recyclate Systalen produced by Der Grüne Punkt (Green Dot). This features 96 per cent post-consumer recyclate in an extruded monolayer tube and has been adopted by Kao, a large cosmetic firm that is a major producer of toothpaste in Japan. The other 4 per cent is masterbatch.

"Colour consistency is always the challenge with recycled material, and this recyclate comes from the Yellow Bag in Germany. It is impressive how white they have got it," said Sander.

C Pack Creative Packaging showcased an innovative tube made using Green PE from Braskem, post-consumer resin (PCR) and post-industrial resin (PIR). Alongside this was a 70 per cent paper-based tube by L'Oreal that the brand will launch next year, and this is made using material from Stora Enso on a Saesa laminate tube machine. The tube will feature a Decoseam side-seam and will need an EVOH or aluminium barrier.

"Germany is investing in paperboard recycling, and it is said that this tube could go into the beverage carton industry/liquid paperboard waste stream," said Sander.





The third generation of Aisa's printed side seam welding system is on the booth, with the exhibited machine sold to Thailand's Kimpai Group. The BM 120 on display can handle up to 120 sleeves a minute and side-seam up to 24m/min. Featuring a catchily named 'Perfect look', aesthetic defects with the seam are captured in-line, to enable brands to achieve a perfect seam.

Kimpai Group will also be receiving the PTH 90 tube heading machine on display after the show ends. This handles tubes from 60-235mm in length and also offers quality control systems including shoulder and orifice inspection, sleeve orientation control and Bacomex inspection. The PTH 90 is more of an entry-level machine and is part of a family that includes the PTH 100, PTH 150 and PTH 240m.

As for how far tubes can go when it comes to light-weighting, Sander comments that the sleeve offers the best area for this. "You must weld the shoulder to the sleeve and this needs heat, so it limits light-weighting."



C Pack presented a tube made from Green PE, post-consumer resin (PCR), and post-industrial resin (PIR)