

FAMILY REUNION

What was described as a family reunion and the most prominent industry seminar for metal packaging professionals, took place at the end of September. Mónica Higuera reports from Tokyo

Canmakers, suppliers and customers met at their annual convention held this year in Japan, a country where canmaking is an art form.

The chairman of Japan's largest packaging company, Toyo Seikan Kaisha's Hirofumi Miki, told delegates that this was "the most prominent industry seminar for metal packaging professionals"; while Dr Ulrich Roeske, chairman of the executive board at German packaging steel producer ThyssenKrupp Rasselstein called it "a family reunion of all the players in the steel and aluminium packaging industry".

In Japan's brewing industry, aluminium beverage cans have a market share of around 70 percent, and **Kirin Brewery**, one of the country's leading brewers opened The Canmaker Summit this year with a keynote speech.

Takashi Ishii, deputy manager at Kirin's Packaging Technology Development Center reviewed the company's history and use of metal packaging.

Kirin's origins date back to 1870 when William Copeland established the country's first brewery, Spring Valley in Yamate Yokohama. Today, Kirin has annual sales of US\$25.6 billion and is expanding into Europe and Brazil.

Kirin began using aluminium cans in 1973 with 209 ends, said Ishii. In 1985 it converted to 206 and in 1994 it was the first of the domestic brewers to use 204 ends. The weight of the can bodies hadn't changed since 1994, but last year Kirin's 33cl cans were reduced from 12.1 to 11.5 grams, Ishii said.

Kirin was also the first to use the 'diamond-cut' can made by Toyo Seikan Kaisha, which when opened releases

internal pressure and the diamond-cut shape appears, for "fun and surprise" and making the surface less slippery, he said.

"Kirin shook the market and the competitors, both liquor and package makers, followed the movement."

Other packages being used by Kirin include aluminium mini-kegs, aluminium bottles, and Toyo Seikan's aTULC cans.

The world's largest producer of beverage cans, US-based **Ball Corporation**, was also represented. Its president for Asia Pacific, Gihan Atapattu spoke of value creation and helping customers grow their business through innovation as well as creating excitement for existing products.

"Nearly all of our metal packaging innovations are the result of collaboration with customers. We understand our customers' goals and markets, and apply our experience, technology and know-how to launch packaging that helps brands leap off store shelves and anticipate consumer needs."

To illustrate this, Atapattu showed a

case study about the Coors Light brand, for which cans and bottle cans have been modified since 2007 to include features such as thermochromic inks and vented wide-aperture openings.

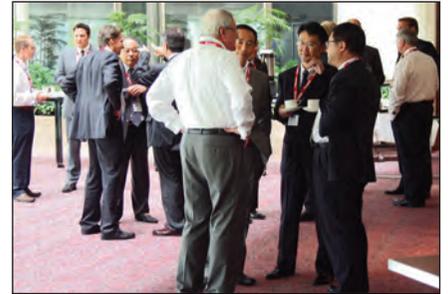
He stressed the importance of being transparent with brand owners and "getting beyond technical people to the marketing people. We dealt with design, procurement, operations and marketing people".

Speciality sizes, smaller serving sizes, and novel finishes are also being used in the switch in the US from glass to metal bottles at craft brewers, who are also blending cans into their marketing.

"Brand owners can then ask for premium prices. The can is adding value," he said. "We need more of this in Asia – getting marketing people to talk about the can."

Retailing giant Walmart has recognised the high sustainability record of aluminium cans amongst 16oz beer packs. Atapattu told delegates that in Walmart's





Main (left to right): ThyssenKrupp Rasselstein's Dr Ulrich Roeske and Tata Steel Packaging's Luc Brantjes listen to Neil Davis, sourcing director for tin mill products at Crown Packaging, who attended with Kevin Ambrose, vice president of metals developments at Crown Packaging UK. Top: Toyo Seikan Kaisha's president Shunji Kaneko with Ball Corporation's president for Asia Pacific, Gihan Atapattu. Above and left: The Canmaker Summit and the Cans of the Year Awards dinner provide an unparalleled networking opportunity

sustainability score card, the aluminium can is the highest with 9.3 points out of 10, followed by the lightweight AlumiTek bottle with 7 points, PET with 5.4, impact-extruded aluminium with 3.4, and glass with only 1.3 points.

He detailed Ball's progress on lightweighting and improved efficiencies. In 2011, Ball completed a lighter-weight can end project in the US which saved more than 10,000 tons of aluminium a year.

Ball's ReAl technology breakthrough will also enable it to lightweight its extruded aluminum aerosol packaging by as much as ten percent, with further lightweighting expected in the future, he added.

In 2010/2011 Ball improved its energy efficiency by 6.2 percent in the can business, and by 10 percent in the aluminium slug business. Over the same period, its water efficiency in canmaking operations improved 0.8 percent, and 39 percent in the slug business.

Value creation was also a subject in the presentation by Kazuhiro Tsujimoto,

director of international operations at Japan's **Daiwa Can Company**. He explained that before the 1990s, technical innovations aimed to grow the application of cans, but thereafter the goal has been to create value-added cans.

In 2011, Daiwa produced 9.6 billion cans, of which 4bn were two-piece beverage cans, 3.7bn were three-piece drinks cans, 725 million laminated recloseable bottle cans, 467m food cans, 189m mini bottle cans (laminated and non-laminated), and 147m were recloseable three-piece cans.

Many of Daiwa's developments have in fact been world firsts, such as the three-piece laminated can launched in 1994, or its New Bottle Can, a laminated and recloseable bottle launched in 2000, whose use has now expanded to the wine market.

In 2004, Daiwa helped create a new market for health and beauty drinks with small reclosable bottles, and the following year it launched its reclosable three-piece can, the so-called wide open reclosable can (WORC).

Also in 2005, Daiwa expanded overseas with the commissioning of DS Containers in the US, which makes laminated steel aerosol cans.

"Our activities were always based on a simple philosophy," said Tsujimoto. "Enrich people's lives through packaging innovations."

Chairman of the executive board at **ThyssenKrupp Rasselstein**, Dr Ulrich Roeske, spoke of the company's developments for canmakers.

He said that the company's answer to a shortage of resources is downgauging, while the need for differentiated and convenient packaging calls for highly-formable steel.

Dr Roeske first reviewed downgauging rates achieved by the industry since the 1970s: three-piece food cans are now 23 percent thinner, crown cork closures 26 percent, D&I beverage cans 20 percent, and aerosols 3 percent.

But he told delegates that the metal packaging community needs to have better solutions for the future, and reviewed new benchmarks and best practices. ▶



The team of Daiwa Can was in celebratory mood having won Gold in the Beverage three-piece can category and the Delegates' Choice award, as chosen by participants at The Canmaker Summit where the shortlisted entries were exhibited. Left: Zeki Saribekir, chief executive of Turkey's Sarten, The Canmaker's editor Mónica Higuera and ThyssenKrupp Rasselstein's chairman Dr Ulrich Roeske

For example, crown cork closures in a 0.17mm gauge are now commercial in South America, made by Packaging Products del Peru; while for food cans, what was called the 'concept can' made of 0.10mm gauge at The Canmaker Summit in Dubai in 2009 is now closer to reality with the first line capable of making 73x110mm food cans in 0.12mm gauge being achieved by Poland's Can-Pack.

Meanwhile for 33cl D&I steel beverage cans, the current starting gauge benchmark is 0.205mm, he said, but there is work currently under development for a further reduction of between 10 and 20 percent.

And with more than 40 different applications in market, there is also a steel grade for deep-drawn cans with less forming steps and verified expansion rates of more than 40 percent, which enables the creation of sophisticated shapes and formats.

Roeske also reminded delegates that "while in some regions aluminium seems to be the only option, it never is"; and that "recycling content is not the right figure, recycling rate is – we shouldn't accept benchmarks imposed by others to us," he said.

Japan's largest steel maker, **Nippon Steel** gave a presentation just days before becoming the world's second-largest steel maker as a result of its merger with Sumitomo Metal Industries, with the new company now called Nippon Steel & Sumitomo Metal Corporation (NSSMC).

Shinya Higuchi, executive vice president and member of the board of directors provided an update of the company's developments.

Double-reduced (DR) tinplate is increasingly being used, he said. "Single-reduced materials are changing into double-reduced in all parts of the three-piece can."

The company is the only supplier providing DR10 with a Rockwell hardness range of 80-5 and a gauge of 0.13mm, Higuchi explained.

At Nippon's joint venture in Thailand with Sumitomo and Metal One, Siam Tinplate, the company is shifting some production to DR material, he added.

Meanwhile its joint venture with China's Wuhan Iron and Steel Corporation will be commissioned in the fourth quarter next year at Qingshan, Wuhan city in Hubei province, with a production capacity of 400,000 tonnes of tinplate and 400,000 tonnes of black plate.

Higuchi said that tinplate demand in China is expected to grow to between 3.3m and 3.7m tonnes in 2015, compared with 2.3m in 2009.

The world's leading producer of aluminium canstock, **Novelis**, was represented by its president in Asia, Shashi Maudgal.

He noted that 61 percent of the company's sales are in the beverage can business, with expected global growth rates of between 4 and 5 percent over the next decade, driven mostly by consumption of beer, especially in Asia.

Maudgal also explained that Novelis is building the world's largest recycling network, with its latest facility being commissioned in September at Yeongju, in South Korea.

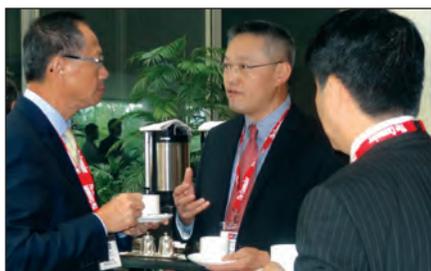
New recycling capacity is coming on line at the Pindamonhangaba mill in Brazil in two years' time, he added, while other facilities are at Pieve Emmanuel in Italy, Alunorf near Düsseldorf and Nachterstedt in Germany.

Maudgal believes recycling rates and recycled content are both important measures and go hand in hand, and spoke of Novelis' goal to increase the recycled content of its products from 33 percent in 2010 to 80 percent by 2020. Currently at 39 percent, the milestone of 50 percent is targeted for 2015.

A poignant reminder of the importance of food cans was provided by Takashi Yamamoto, president of the **Peace Boat** Disaster Relief Volunteer Center, the organisation which helped recover around 600,000 cans from the Kinoya canning factory in Ishinomaki, following last year's devastating earthquake and tsunami. The seafood cans became known as 'cans of hope'.

"For the first month there was no gasoline or transportation and people couldn't get anything. We were eating canned food. It was very helpful," he said.

The chief executive of US-based inspection system supplier **Applied Vision**, Amir Novini, kindly stepped in at the last minute to replace a speaker. He told dele-



Clockwise (left to right): The Canmaker Summit includes a drinks reception before the Cans of the Year Awards dinner, where (top right) Allan Sayers, publisher of The Canmaker, presented the Gold prize for aerosols to DS Containers' vice president for sales, Matt Kuehn. Toyochem Co's operating officer Takeshi Kondo and president Motohiko Kashioka talk to Ms Michiko Tsurumaru, senior editorial board member of The Canmaker, formerly at Toyo Seikan Kaisha. Suntory Business Expert's procurement specialist Norito Yonezawa and package design specialist Yuji Suzuki listen to Valspar Rock Co's general manager Kiyoshi Imaizumi. Mike Mei, general manager of packaging coatings at PPG Industries in China talks to Pacific Can's chief Glenn Yee (far left) and general manager Danny Li

gates that machine vision will keep “getting stronger and stronger”, and explained that distributed and autonomous processing is “the way to the future”, as opposed to central computing.

Novini also spoke about Applied Vision's tools for colour inspection such as the DecoScan and DecoMaster, which help canmakers achieve colour consistency.

Japan's largest packaging company, **Toyo Seikan Kaisha** (TSK), has almost 100 years-experience in canmaking and a mix of passion and devotion to the metal containers industry, its chairman Hirofumi Miki told delegates.

“Metal packaging is naturally the best choice. It is unarguably the most sustainable packaging,” he said, adding that it must however be more innovative and communication must become more creative. “This is a weakness in Japan,” he said.

“We also need to put more value-added technologies on the market, that is to say: decoration, environmental benefits and universal design. This is, and I hope you will agree with me on that, one of the strengths of the industry in Japan,” he said.

“We are here to lead metal packaging's sustainability and innovation with the dry-forming technology.”

Toyo Seikan's dry-forming technology is a two-piece aluminum and steel can man-

ufacturing process that does not require the use of water, coolant or the application of coatings, reducing its impact on the environment.

In 2006, Miki announced at The Canmaker Summit in Spain that the company would make its Toyo Ultimate Lightweight Can (TULC) technology available outside Japan, where it has 20 such lines operating.

In the last four years three new lines have started up in China and Thailand, and the first licensee will start up production in the second quarter of 2013 in Iran – Sherkate TULK Iranian.

“Today any beverage canmaker anywhere in the world has the option of using our eco-friendly dry-forming technology.

“And the solution we put in place to expand our technology is vertical integration. The rationale behind vertical integration is that true innovative synergies can only emerge when all actors in the value chain start working toward a common superior interest.”

Part of this vertical integration was TSK's acquisition of US-based canmaking machinery business Stolle last year; while to supply laminated canstock to existing and anticipated TULC operations, TSK plans to commission a canstock coating operation in Thailand in the first half of 2014 which will become its base for global expansion of TULC production.

As of next year, TSK will also offer beverage can ends with a non-BPA-based lacquer.

“Justified or not, wrongheaded or not, this BPA controversy has unfortunately damaged the reputation of metal cans in spite of it being the safest and the most tested container ever,” said Miki.

“We decided to take the lead and announce today that we are going to commercialise BPANIA [BPA non intentional added] ends from next year,” he said.

Miki finalised his presentation with the best description of cans we have heard: “Metal cans are colourful, beautiful; they are imaginative, inspiring, warm, kind, friendly, inviting, provocative, sexy, glamorous, chic, cheerful, talkative, sturdy, dependable, hard-working, clever, strong – and always useful.

“Indeed, metal cans have many faces and they are here to be a part of our daily life – to enrich our life.

“Having worked in the metal packaging industry for far too long, I start to think that metal cans are just like us human beings. We have many different faces and different characteristics. People look at us only from the surface and form prejudiced opinions against us.

“People take it for granted that metal cans are always here; and they do not realise that our society cannot exist without metal packaging.”