

A world of drums

PROFILE Through its global network of members, the Mauser International Packaging Institute can supply a vast array of plastics drums and assorted packaging produced according to uniformly high levels of quality, safety and reliability

Founded in 1992, the Mauser Industrial Packaging Institute (MIPI®) is a worldwide network of Mauser licensees producing plastics drums, jerrycans and composite intermediate bulk containers (IBCs). Members serve both their respective local markets and participate in global supply contracts. The organisation currently comprises 21 licensee members in 21 countries in addition to Mauser itself as well as three preferred raw material suppliers each holding the position of associate member. Not to be confused with Drumnet, a separate grouping of Mauser licensees producing steel packaging, MIPI is directed by a steering committee of eight individuals representing different global regions (see box).

Although membership of the organisation is granted exclusively to Mauser licensees, members remain fully independent entities. Rather, MIPI, explains services director Dubravka Duic, was conceived from the outset to function as a mutually beneficial marketing network while providing a forum for the facilitation of international cooperation and the exchange of information, expertise and best practices in such key fields as product and service quality, working capital, raw materials and supply, unit standardisation and regulatory compliance. To help advance this, MIPI, among other things, convenes a general conference every two years and at least one workshop per annum, with the next set to take place in Dubai this coming April.

Benefits all round

For MIPI members, the organisation provides “ready access to Mauser’s know-how, global network and experience” in a symbiotic relationship that also has clear strategic benefits for Mauser itself. “At Mauser we have 54 factories but still

there are areas where there are no Mauser factories,” Duic says, explaining that the MIPI network thus enables the company to fill these gaps in its international coverage. At the same time, with each licensee operating in its own specific region or country, the geographical distribution of the organisation means that no member treads on another’s toes. “We want our licensees to [achieve good] volumes,” she says.

Meanwhile, for the customer, the MIPI network ensures a pretty much seamless worldwide supply of plastics packaging regardless of where their operations take them. Furthermore, as all MIPI units are produced to meet certified and audited levels of quality, customers can be assured that a MIPI unit sourced, for example, from a developing country will be of the same high standard as that bought from Mauser in its home country of Germany.

In order to achieve this, MIPI not only works closely with major polymer producers around the world to ensure a worldwide supply of consistently high grade raw materials, but also mandates that all finished products are manufactured according to standardised designs with regard to volume, dimension, openings and fittings. Consequently, MIPI products are all imbued with uniform and therefore reliable characteristics in terms of safety and performance and are manage-



able by common filling, discharging and handling equipment, all factors of great consideration in an era of increasing globalisation and global procurement. Moreover, MIPI products are fully backed by accumulated know-how and technical expertise available sans frontières, or as the organisation’s slogan puts it, “global support from a local source”.

But, as Duic explains, MIPI is not just concerned with the delivery of new units: the organisation’s service offering covers the “the whole life cycle” to included the worldwide collection of used packaging.

To accomplish this, MIPI not only works in conjunction with National Container Group (NCG), Mauser’s own reconditioning subsidiary which, having this year formed joint ventures

plastics drums

with TDG in the UK and HM Buchtenkirchen in Germany, now operates seven sites in Europe in addition to eight facilities in North and South America, but also maintains a worldwide database of audited reconditioners, meaning used units can be collected from essentially anywhere for subsequent reconditioning, recycling or disposal.

New developments

In terms of the organisation's evolving product basket, Duic reveals that a number of new Mauser products and technologies were presented to members at the latest MIPI conference in Shanghai this past October. One such innovation was the V-Press drum. Unveiled by Mauser at the start of the year, this straight-sided 220 litre open head system has been designed to handle high-viscosity products, such as silicones, discharged using a pressure plate.

Targeting an area previously the preserve of steel drums, the V-press features the same inner diameter as a traditional steel unit but due to its HDPE body is immune to the sort of permanent denting that can otherwise impede the passage of the pressure plate during emptying and so disrupt a customer's operations.

Also showcased in Shanghai was the new four-layer 4-EX drum. Building on Mauser's existing three-layer plastics drum for EX zones, this particular drum design incorporates a conductive outer layer in addition to a second conductive layer sandwiched between two isolating inner layers. Importantly, this technology enables the producer to further reduce material costs involved due to the fact that high priced conductive material is just used in areas where really needed.. Likewise, the thickness of the inner layer of virgin PE material can also be reduced, with the resultant protection from electrostatic charging increasing in line with the proximity of the filling product to the conductive layer.

To do so the drum's body is fitted with a contact strip that connects the conductive layers to prevent the electrostatic charging of the drum's inner wall, with all charges discharged through the grounded conductive outer layer. Moreover, an optional second contact strip can also be embedded in the inner PE layer to ensure grounding of the contents. CENELEC-certified for II B products (DEKRA) and suitable for both IIA and II B products, this new system, Duic explains, is currently undergoing field trials with customers, with MIPI members now in a position to appraise their own particular markets and identify areas where this new technology could be deployed.

Nanotech drums

Another advancement presented at the Shanghai conference that could well start making itself known around the world via the MIPI network is the new naNO-Perm™ permeation barrier technology. While four-layer designs incorporating

barrier layers made of polyamide or EVOH have been used successfully for a number of years on smaller packagings, drums and composite IBCs have historically been treated using offline fluorination. In 2006, however, Mauser also implemented six-layer technology with an integrated EVOH barrier layer for UN-approved composite IBC, the SM15 BL. Employing this six-layer technology, though, is a complex procedure and one that can not be achieved using or even modifying existing machinery.

Looking to develop an alternative system that would not require major equipment upgrades, Mauser partnered with Korean raw material supplier LG Chem with a view to integrating the latter firm's Hyperier® barrier material into existing Mauser plastics packaging. A polymer blend modified by nano-sized silicates, or nanoclays, Hyperier was originally developed to be used in single layer HDPE applications. Pooling their

respective expertise in the fields of raw materials and plastics engineering, the two companies came up with the naNO-Perm two-layer system for industrial packaging in which the container's contents only come into contact with the PE inner layer.

While the naNO-Perm technique boasts barrier characteristics similar to those attained through fluorination or the six-layer EVOH approach, the particular level of barrier performance can be adjusted by varying the thickness of the Hyperier layer. As a result, this new technique provides much greater flexibility in terms of meeting specific customer requirements when compared to the EVOH alternative. Very importantly, it can be implemented using existing Mauser-built blow-moulding machines without interfering with their production of standard HDPE packaging, ensuring that the overall efficiency of the equipment in question remains uncompromised. Moreover, the naNO-Perm technology can be applied to the production of a wide variety of packaging types, ranging from jerrycans and smaller packaging right up to large drums and IBCs, and thus Mauser plans to implement it incrementally across its entire portfolio once all customer trials have been successfully completed.

MIPI's new steering committee

As well as presentations of the latest drum technologies available to members, the recent MIPI conference in Shanghai also saw a number of changes to the organisation's steering committee.

Peter H Schaefer, Mauser's senior executive vice-president, global sales and marketing and chief executive of NCG, was elected chairman, with Dubravka Duic, Mauser's vice-president, global sales and marketing, Europe, elected services director.

The primary contact and official representative of the MIPI organisation, she will be supported in her role by Maggy Bieker as administrative coordinator and marketing assistant.

Meanwhile, Ron Litchkowski stepped down as the organisations' North American representative and was replaced by Siegfried Weber of Mauser Corp.

The committee's remaining positions will continue to be held by Urban Mansson (Hannells, Sweden) and Frank Schüller (Mauser Machinery, Germany) for Europe, Eric Riedel (Plasti-Envases, Mexico) for Latin America and Long-Shing Liao (Chang Chun, Taiwan) and Tony Girgis (VIP Packaging, Australia) for Asia-Pacific.

Expanding the boundaries

Despite Mauser and MIPI continuing to expand the boundaries of the plastics drum, though, there nonetheless remain many areas where steel alternatives will continue to dominate. "There are still a lot of filling goods that can't be switched due to product [characteristics] and hot fills," Duic notes, adding that despite the attractiveness of plastics units they will "never substitute 100 per cent".

That said, though, she reports that there is still much ongoing switching from steel drums to plastics drums around the world, although this is itself tempered to a certain degree by switching from plastics units to IBCs, both of which MIPI produces. Consequently, while Mauser views the steel drum market as essentially flat, plastics units continue to clock up growth of around 2 to 3 per cent per annum.

Geographically, the bulk of this actual and potential growth is located in Asia, and in particular China, with other regions, such as the still very important markets of Europe and North America, already served by "enough capacity". But while much doom and gloom abounds with regard to the current economic malaise impinging the fortunes of the world economy and China to boot, Duic remains upbeat. For while the chemical industry is currently cutting back production, MIPI, with its worldwide presence and focus on quality and innovation, continues to look strong with its individual members "well prepared for times of slowdown".

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