India currently more than two million tonnes of plastics per annum.

Bold expansion plans for MBA Polymers

By Ian Martin

With plants taking shape in both China and Austria, high-profile plastics firm MBA Polymers is already setting its sights on expansion. An update on the company's progress was provided at the BIR Plastics Round-Table in Milan, which also heard details of a question mark hanging over many of India's plastic scrap importers.

The BIR Plastics Round-Table with from left: Dr Mike Biddle of MBA Polymers, Committee Chairman Peter Daalder of Daly Plastics; Jacques Musa of Soulier-Onyx and Surendra Borad of Gemini Corporation.

The appearance of Dr Mike Biddle at last month's BIR Plastics Round-Table in Milan was indeed timely. His company MBA Polymers, Inc of the USA - a leading light in the recycling of plastics from consumer durables such as cars and electronic goods - had opened a joint venture processing plant in China only a matter of days before the BIR Convention and is expecting to start up another processing unit in Austria by early next year.

MBA Polymers has invested over US$ 30 million in developing its technology. And Dr Biddle was able to assure delegates in Milan: 'We plan on expanding in Asia and Europe. I have investors lined up to build more plants.'

The joint venture with Guangzhou Iron & Steel Enterprises (GISE) involves a US$ 14 million processing facility in China's Nansha Development Zone which is capable of processing 40 000 tonnes per annum. An identical capacity is claimed for the processing plant venture with leading metals recycler Muller-Guttenbrunn GmbH, which is due to come on stream shortly at Kematen in Austria.

World's largest consumer

According to Dr Biddle, the decision to locate a processing facility in China had been based on a number of factors. The South East Asian giant is the world's largest consumer of plastics, as well as the biggest importer; in addition, a large proportion of MBA Polymers' customers are actually based in China. From the perspective of the Chinese, the MBA Polymers recycling route offered the welcome possibility of eliminating much of the water and energy consumption associated with producing new plastics, he explained.

Development of the plant at Nansha had not been without its problems, acknowledged Dr Biddle. For example, shortly after MBA Polymers had committed 'millions of dollars' to the project, the Chinese authorities had announced a stop on imports of plastics scrap from Japan - a country which had been earmarked as one of its primary sources of feedstock given that more than 30 electronics recyclers in Japan are generating an estimated 100 000 tonnes of plastics scrap each year. Fortunately, the ban had since been lifted.

The initial focus of feedstock for the Austrian plant would be electronics scrap from which metals had already been recovered, the speaker added.

The process to be adopted at both facilities comprises a number of stages, including size reduction and liberation, separation of non-plastic items, separation of mixed plastics, final cleaning and sorting, and pelletisation and/or compounding. The techniques employed by the company ensure the separation not only of different plastics but also of different grades, for example, the extrusion and injection grades of polystyrene. In this way, noted Dr Biddle, it was possible to maximise material values.

Delegates in Milan also heard that some of the companies supplying scrap to MBA Polymers are taking back the final product and using it to manufacture 100% recycled content components. 'So we close the loop,' insisted Dr Biddle. Stricter landfill restrictions in many countries had improved the flows of material to MBA, the speaker added.

Not much incentive

On a connected theme, Surendra Borad of Belgium-based Gemini Corporation reiterated that, contrary to rumour, India was not importing electronic scrap because it lacked the infrastructure to recycle such material. 'When the fate of even regular polyethylene scrap (recycling) is hanging in the balance, there is not much incentive to get into this business,' he told delegates in Milan.

According to the speaker, upwards of 2 million tonnes of plastics were recycled each year in India - a country which consumed some 4.2 million tonnes of plastics per annum. However, an uncertain future was awaiting some 20 of the 30 Indian operations licensed to import plastics scrap; their licences were due to come up for renewal at the end of October and extensions had yet to be approved by the industry ministry. He added: 'About 6000 tonnes of plastics scrap is being imported every month. If these licences are not renewed, then the quantity will be reduced to about 3000 tonnes per month.'

BIR Plastics Committee Chairman Peter Daalder of Daly Plastics in The Netherlands reported that, on June 1 this year, Germany had implemented a ban on the landfilling of burnable and recyclable materials. The supply of some grades - such as mixed rigid plastics and dirty LDPE 60/40 - had improved since the introduction of the ban, he said. □

Scrap tyres continue to make market inroads

Rubber granulate derived from scrap tyres and used in the manufacture of artificial sports pitches has been accepted by the Dutch government as a product rather than a waste, according to Barend Ten Bruggencate of VACO in The Netherlands.

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Chairing the BIR Tyres Round-Table in Milan, Mr Ten Bruggencate said that artificial pitches represented one of a number of developing markets for processed scrap tyres. Typically, each of these pitches consumed 50 tonnes of granulate in its base and a further 40 tonnes in the top layer. Unlike grass, the final surface did not require cutting and was not so susceptible to weather conditions. And whereas artificial pitches of the past had been associated with burns, this was no longer the case, he explained.

A further insight into the wide range of outlets for scrap tyres was provided by the Round-Table's guest speaker Dr Pier Clemente Mantegazza, Operations Director with the non-profit Italian consortium EcoPneUs which was set up in 1994 specifically to deal with issues surrounding used tyres. In addition to listing some of the more familiar applications of scrap tyres - including their use as erosion barriers, artificial reefs and embankment stabilisers - the speaker said that end-of-life tyres were being employed in electric arc furnaces in Japan 'as a source of carbon and steel during the manufacturing of steel at 1650 degrees'. This approach was saving natural resources and cutting costs, while also reducing carbon dioxide emissions in comparison to coal.

Having pointed out that European cement kilns using tyre-derived fuel were 'already complying with the Incineration Directive of 2008', Dr Mantegazza closed his presentation with the confident assertion: 'For us, used tyres are not a problem but an opportunity.'

Chairman Barend Ten Bruggencate of the BIR Tyres Round-Table (left) and guest speaker Dr Pier Clemente Mantegazza of the non-profit Italian consortium EcoPneUs.

In his customary review of latest legislative developments, Mr Ten Bruggencate argued that controls on transboundary movements of materials would become 'extremely strict' over the next five years. He added that the process of revising EU waste shipment regulations had generated proposals which, if adopted, could lead to the widespread publication of shipper, customer, licence and route details on the Internet. Any such move would have serious implications for confidentiality, he insisted. □