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INTERNATIONAL POLITICAL FORCES SUCH AS BREXIT, THE U.S.-CHINA TRADE WAR, AND POTENTIAL CHANGES TO THE BASEL CONVENTION MADE IT DIFFICULT FOR THOSE AT THE FALL BUREAU OF INTERNATIONAL RECYCLING CONVENTION TO SEE THE PATH AHEAD. BY MEGAN QUINN

From the windows of the convention hotel, participants at the 2018 Bureau of International Recycling (Brussels) fall meeting in London had a sweeping view of the River Thames. The river was a relevant backdrop to discussions of Brexit and its possible consequences on scrap trade, but other major foreign-policy issues loomed large, too, including the trade war between China and the United States, the Trump administration's Section 232 tariffs on aluminum and steel, China's scrap import restrictions, and proposed changes to the Basel Convention that could affect the scrap

industry. During the three-day conference, which drew about 889 participants, presenters characterized these factors as "a wild ride," "challenging," and "an unpredictable mess." Most experts still felt confident that business in 2018 would end on a positive note—"The scrap industry adapts, and the market finds a level," said interim Ferrous Division President **Tom Bird** of Chiho Environmental Group (Hong Kong)—but business in 2019 is anyone's guess. With so many political factors up in the air, the future is as murky as the waters of the Thames.

FERROUS FOCUSES ON TARIFFS AND TRADE WARS

Speakers at the BIR Ferrous Division meeting kept a close eye on how the Trump administration's trade decisions influenced global scrap



Lee Allen

flows in 2018. Speaker **Lee Allen**, a metals analyst for Fastmarkets (London), said the U.S. Section 232 tariffs—25 percent on steel imports and 10 percent on aluminum imports—haven't slowed the United States' ferrous scrap exports to Turkey. There's a "strong mutual dependence" between the two countries, he said. Turkey increased its reliance on imports of U.S. scrap in 2018, he noted: Between January 2016 and August 2018, an average of 17.6 percent of the ferrous scrap Turkey imported came from the United States. That number went up to 20.3 percent in August 2018. "Movements show that U.S. scrap market prices remain largely dependent on Turkey," he said.

Turkey's overseas steel scrap purchases increased 15.5 percent, to 10.8 million mt, in the first half of 2018, but the country has started to rely less on scrap from the United Kingdom, added **Rolf Willeke**, a statistics adviser for BIR. In response, UK scrap exporters diversified their customer base in 2018, increasing scrap exports to Egypt by 32 percent, to 443,000 mt, in the first half of 2018, while shipments to Bangladesh went up more than 200 percent, to 192,000 mt, he said.

Analysts also kept a close eye on China and its steel demands. From January to June 2018, China increased its steel scrap use for crude steel production by 41 percent, to 87.7 million mt, compared with 62.2 million mt during the same period in 2017. This jump is likely because most of China's basic oxygen furnace mills increased their scrap ratios to about 20 to 25 percent to meet stricter pollution emission standards and avoid production restrictions, Willeke said. China is installing or planning to install several new elec-



Zain Nathani

tric-arc furnaces, and "as a result, further investments in steel scrap processing are planned, especially in shredder capacity," he said.

Zain Nathani, managing director of the Nathani Group of Cos. (Mumbai), said the U.S.-China trade war's impact on currencies worldwide hurt India's importers when the rupee lost 10 percent of its value recently, reaching a record low against the U.S. dollar. Traders who

U.S. Section 232 tariffs haven't slowed the United States' ferrous scrap exports to Turkey, according to Fastmarkets metals analyst Lee Allen.

had worried about the effect the United States' increased tariffs on Turkish steel imports would have on ferrous scrap prices relaxed after a price rebound in August. Meanwhile, Bangladesh's steel industry and its scrap demand have continued to grow, but a lack of infrastructure at the country's ports is an issue, he said.

George Adams, president of SA Recycling (Orange, Calif.), said doing business in the United States has been "a wild ride" in 2018 because of tariffs and shifting relationships with China and Turkey. "Scrap dealers don't know what end is up if they're trying to export," he said. Yet there's good news: The U.S. steel mill capacity-utilization rate has increased to about 80 percent, while the capacity utilization rate at many EAFs was up to about 90 percent.

A BUMPY RIDE FOR NONFERROUS

Rising protectionism from trade policies such as import restrictions and tariffs has wreaked havoc on the flow of nonferrous scrap this year, said speakers during the Non-Ferrous Metals Division meeting. **Michael Lion**, president of Everwell Resources (Hong Kong), said these factors have made markets "extremely unpredictable," with "too much scrap in the wrong places."

The expectation that China will no longer accept nonferrous scrap by the end of 2020 is a wake-up call for recyclers, who will have to quickly rethink their business model, said **David Chiao**, Non-Ferrous Division president and principal of Uni-All Group (Atlanta). "Where is the [next] destination for my scrap? And when and how will we prepare for the upcoming challenge?" he asked.

During a panel discussion of politics and recycling, **Andy Wahl**, president of TAV Holdings (Atlanta), said the secondary nonferrous metals industry in the United States is having trouble finding homes for all of the nonferrous material that once went to China. Some companies have had to sell the metal for lower prices in order to maintain cash flow, he said. Lion said recyclers

and traders will do their best to find niche opportunities, but “what that will actually do with scrap flows is really determined by events over which we have no control.” He predicts nonferrous materials once bound for China will go “to other places in Southeast Asia,” at least for the time being.

Dhawal Shah, managing director of Metco Marketing (India) (Mumbai), said India’s largest consumer of secondary materials is the automotive sector, and its demand is growing about 10 percent each year. He pushed back against the assumption that India is basking in new business because of China’s import restrictions and trade complications. More long-term, steady growth needs to happen, he said.

An economic report from **Edward Meir**, director of Commodity Research Group (New York),



Edward Meir

put the trade war between China and the United States front and center. Meir believes the tariffs are a “blunt instrument” that “create more problems than they will solve” by hurting business investment and causing the cancellation of major projects. Washington’s current trade policy is “dangerous and built on faulty assumptions,” he said. He gave the example of home appliance manufacturer Electrolux, which paused plans to expand its plant in Tennessee because steel and aluminum tariffs would make it too expensive for it to export finished products, he said. Rumors of companies building nonferrous secondary refineries in the United States are raising hopes of more nonferrous demand, but “if China is not a free import market, those plants may also not materialize,” he said. China’s import restrictions and the ongoing trade war mean more American aluminum scrap is going to Mexico’s secondary smelters, added **Mogens Christensen**, commercial director of H.J. Hansen Recycling Industry (Odense, Denmark).

Meir said Trump administration tariffs and trade restrictions have directly affected metal prices. He predicts prices for copper could even out next year, but only if there is a “truce” in the trade war, he said. Meanwhile, he predicts aluminum prices may also even out if the United States lifts its sanctions on Rusal, a Russian aluminum company facing sanctions from the Trump administration due to alleged illegal activity. (The administration announced in late December that it intends to do so.)

PLASTICS REFLECTS ON SOUTHEAST ASIAN MARKETS

Markets for plastic scrap are in flux because of import restrictions and shifts in recycling operations in Asia, panelists at the Plastics Committee meeting said. After China announced in 2017 it would no longer import most plastic scrap, nearby countries such as Malaysia, Vietnam, Indonesia, and Thailand enacted similar restrictions. “Faced with an influx of materials, all these governments



Renaud Pfund

are putting in place strict controls to limit the environmental impact,” wrote **Renaud Pfund**, plastic sales manager of Veolia Propreté (Paris), in the *Plastics Mirror* report. Most of these countries do not have the infrastructure to

accommodate the millions of tons of plastics that once went to China and need time to develop policies and build infrastructure, said **Steve Wong**, president of the China Scrap Plastics Association (Beijing) and CEO of Fukutomi Plastics (Hong Kong). In India, added factors such as the limited availability of import licenses make it challenging to ship plastic there, too, said **Surendra Borad**, chairman of Gemini Corp. (Antwerp, Belgium), outgoing chairman of the committee. “But the good news is that India is coming up with a new policy” that could help, he noted.

Now that China is no longer importing most scrap plastic, it will need to improve domestic plastic recycling, focusing not just on collection methods, but on raising recycling rates, Wong said. “Most recyclers have moved to Southeast Asian countries, and very few stayed in China to recycle domestic scrap,” he said.

Committee members also discussed a recent proposal Norway submitted to the Basel Convention that would classify plastic scrap as “wastes requiring special consideration.” The proposal aims to “avoid the mismanagement of plastic waste” and crack down on the material entering oceans, it says. Both BIR and ISRI raised concerns over the proposal because it might prohibit export of nonhazardous plastic scrap from the EU to countries that are not part of the Organisation for Economic Co-operation and Development, and companies in the United States would only be allowed to export in limited cases. Norway has since withdrawn parts of its proposal, and Basel Convention participants will revisit the idea at its spring convention in April. Pfund was among those who opposed the original proposal, writing that “adding new regulatory constraints



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will not boost recycling solutions." He called instead for open markets and locally based recycling centers.

Speakers also discussed research about the origins of ocean plastics, including a study from the journal *Environmental Science & Technology*, which found that 88 to 95 percent of plastic found floating in the ocean originates from just 10 rivers in the world, eight of which are in Asia.

Keith Freegard, vice chair of the British Plastics Federation's Recyclers Group

(London) and associate consultant at Axion Polymers (Cheshire, England), said ongoing discussions about ocean plastics are key to building momentum against pollution.

When the BBC recently ran a documentary on ocean plastics during prime time, "a time where you'd normally get a soap opera or quiz show," it showed that the public is invested in learning how to stop the pollution, he said. Education is one way to boost recycling efforts and train people how to recycle more effectively—something he hopes more UK residents can learn. There's a lack of consistency in how recyclables get collected in the UK, he said, and the public gets confused about what can be recycled. At the same time, major brands need to pledge to use more recycled content in products and create products that can be more easily recycled—something the public is starting to demand, he said.

Meanwhile, in the United States, plastic scrap markets are "holding steady" despite China's import ban, said Sally Houghton, deputy executive director of the Plastic Recycling Corp. of California (Sonoma).

Yet sellers are still having trouble finding markets for low-grade material.

Mahmoud al Sharif, a sales executive

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Mahmoud al Sharif

with Sharif Metals International (Sharjah, United Arab Emirates), said the Middle East needs more technological investment in scrap processing to match higher scrap flows. "Accumulation of scrap waste in the Middle East is driving private businesses to consider supporting investing in machinery and technologies to process it instead of it sitting idle," he said.

PAPER COMMITTEE QUESTIONS BREXIT PLANS

The attendees had plenty of questions about Brexit and its effect on the scrap industry after **Deborah Sacks**, a waste and resource management specialist from the UK's Department for International Trade (London), addressed the topic



Deborah Sacks

at the Paper Division meeting. Sacks said she is confident that the UK and the EU will reach an agreement on the UK's departure from the EU, despite the naysayers who think otherwise. "Our government is committed to making it

happen and committed to making it work," she said. The UK government also has a "huge will to ensure that [scrap] materials will continue to flow" during and after Brexit, she said. BIR President **Ranjit Baxi**, founder and presi-



Ranjit Baxi

dent of J&H Sales International (London), echoed that confidence. The UK government "wants to retain trading relationships with the EU and the rest of world," he said, and the recycling industry will be resilient during the transition. "We always stand up to the challenges and continue to trade."

Yet both Sacks and Baxi agreed Brexit could cause complications, too. Those looking to move material could face delays and increased costs, Sacks said. And Baxi worried that a "hard Brexit"—a scenario in which the UK would leave without negotiating access to certain EU benefits, such as the customs union and the EU's single market—might lead to "a lot of problems" with paperwork and documentation requirements when shipping recovered fiber from the UK to the EU.

As UK recyclers sort out Brexit issues, they must also continue to focus on producing better-quality grades of recycled fiber, said panelist **Keith Trower**, managing director of Viridor Resource Management (Devon, England). China's import

The UK government has a huge will to ensure scrap materials will continue to flow during and after Brexit, said Deborah Sacks, a government waste and resource management specialist.

ban on certain grades of recovered fiber was "a wake-up call" for paper recyclers, and "we have to survive in the market by investing" in equipment and methods for enhancing paper quality and reducing contamination, he said. It's especially important as other Asian countries consider adopting recycled fiber import policies similar to those in China, Sacks and Baxi said.

To satisfy China's demand for paper, Chinese companies could establish production facilities in places like the United States and Europe, Sacks said. This might be an opportunity for enterprising recyclers, Baxi added. "With some of the industries relocated out of China to meet the demand, some people in this room might consider making investments outside China to support increasing demand in China," he said. **Francisco Donoso**, managing director of Alba Servicios Verdes (Madrid), predicts that if China's demand outstrips its recycled fiber supply, it might end up using more virgin material to make boxes and other packaging. **Adina Renee Adler**, senior director government relations and international affairs for ISRI, said this might disrupt future recycling efforts. "We're also being told that China uses a lot of synthetic material in its cardboard boxes, making them not recyclable in the future."

Recyclers and the government also must work with major brands to set goals to increase recycled material in packaging, Trower said. He sees encouraging signs that "brand-led" initiatives to increase recycled content in packaging are gaining momentum. "It's a fantastic time to be in the business. I'm delighted. Instead of brands sitting back, they have to be sitting forward" to commit to using recycled content in packaging, he said.

IEC BRACES FOR BREXIT

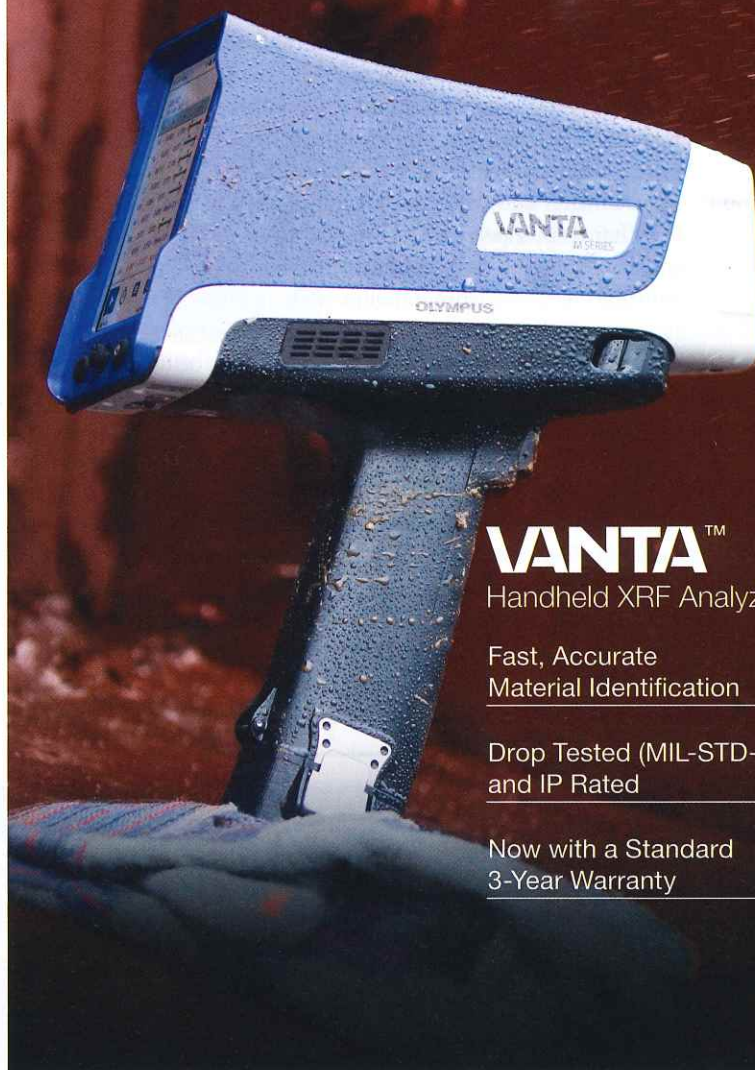
Brexit concerns continued into the International Environment Council meeting. **Hilary Stone**, a research fellow at Imperial College London's Centre for Environmental Control and Waste Management, said there could be serious trade

issues if the UK leaves the EU without a withdrawal deal or extension of the negotiating period in place by March 29. Without a deal, the UK will face new tariffs on scrap exports to the EU, but it also will be able to set tariffs on imports of scrap into the UK, she said. The UK and the EU have agreed to observe a transition period lasting through 2020 that treats the UK as if it were still an EU member state. However, this agreement is not legally binding until the two parties agree to and ratify the withdrawal deal, Stone said. The UK has agreed to match the EU's waste shipment regulations—which cover some recycling activities—so the two laws will be identical. That agreement hasn't been confirmed yet, so **Olivier François**, IEC chairman and market development officer at Galloo Recycling (Menen, Belgium), recommends that UK recyclers check current shipment agreements to ensure shippers will meet six-month notification requirements that might take effect if no deal is reached.

BIR Trade & Environment Director **Ross Bartley** discussed other regulatory concerns, including proposed changes to certain Basel Convention annexes that could reclassify mechanical recycling operations as pre-treatment/interim/preparatory operations. BIR officials believe the change would prevent all mechanical processors from being classified as recyclers. BIR officials have submitted technical information on mechanical recycling of materials such as aluminum, copper, glass, iron and steel, slags from iron and steel works, nonferrous metal, and end-of-life tires, he said.

The informal recycling sector has a large but often unseen impact on global recycling efforts, said guest speaker **Anne Scheinberg**, a global recycling specialist with Springloop Cooperatie (Zwolle, Netherlands). Depending on the city

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or country where it operates, the informal sector captures 15 to 25 percent of material for recycling, but these efforts aren't usually integrated with the formal recycling economy and these collectors' efforts aren't reflected in international recycling data. Formal and informal recyclers need to work together to increase collection efforts, create and preserve jobs for low-income workers, and protect informal workers from dangers such as child labor, prejudice, and safety issues. "A threat to them is a threat to you," she said. "You can offer your informal supply chain legitimacy, protection, and prices."

INDONESIA AFFECTS NICKEL/STAINLESS MARKET

Indonesia has become a key player in the nickel and stainless steel markets because of production growth from Chinese producer Tsingshan, said **Jim Lennon**, senior commodities consultant at Macquarie Capital (London). The guest speaker at the Stainless Steel & Special Alloys Committee meeting said Indonesia could supply about a



Jim Lennon

quarter of global nickel by the end of 2018 and had been "a very large contributor" to stainless steel production growth that year. Tsingshan added 2 million mt of annual stainless melt capacity in Indonesia in 2017 and planned to add 1 million mt in the second half of 2018, he said. Taiwan is now the largest importer of Indonesia's nickel—previously, more than 80 percent went to China, he said.

World output of stainless steel increased 7.6 percent in 2016 and 6.7 percent in 2017, but Lennon said growth may have slowed to 3.4 percent by the end of 2018 and could slow further to 2.6 percent in 2019. However, global protectionist measures across the United States, China, India, and Europe "make it very hard to know how the flow will change over the next 12 months," he said. Strong global stainless steel production has helped nickel prices rise over the last few years, but the prices also have been volatile, "and I don't



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see that changing anytime soon.” He predicted the LME cash price could be about \$16,000 per mt in 2019 compared to the \$13,800 estimated for 2018’s average.

An International Nickel Study Group report predicts nickel use will increase to 2.4 million mt in 2019, but global production will be only 2.39 million mt. One area where nickel use is growing is in the battery sector: Nickel use in batteries has been growing about 30 to 40 percent a year, Lennon said. “Everyone talks about batteries, which are only about 4 percent of demand” for nickel, he said. “But this year the battery market is growing by 35 percent, which amounts to a slow burn over five to 10 years.”

TIRE RECYCLERS WRESTLE WITH PERCEIVED HEALTH RISKS

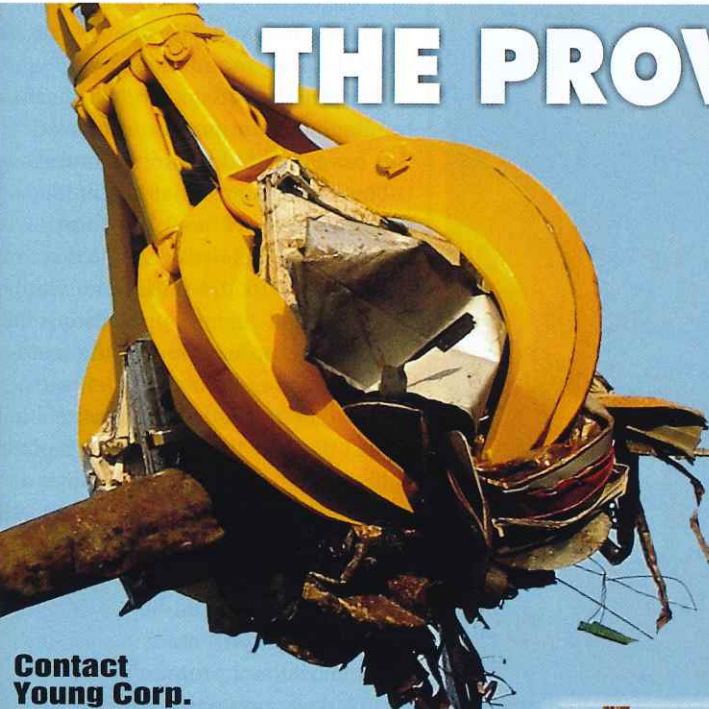
Concerns about possible health impacts of recycled tires have negatively affected the recycled rubber industry, according to speakers at the Tyres & Rubber Committee meeting. “Public opinion is an extremely heavy factor in our business,” said Chair **Barend ten Bruggencate** of RecyBEM (The Hague, Netherlands).

Speakers were particularly concerned about the European Chemicals Agency’s plan to research possible health impacts of substances from processed end-of-life tires, such as polycyclic aromatic hydrocarbons. ECHA could publish new limits and restrictions on such substances sometime in 2019, said **Fazilet Cinaralp**, secretary general of the European Tyre and Rubber Manufacturers’ Association (Brussels).



Fazilet Cinaralp This information could lead countries such as the Netherlands to restrict the use of crumb rubber on turf fields and in playground mulch unless product manufacturers meet strict concentration limits for PAHs. “All our interest” is focused on what ECHA will say, ten Bruggencate said.

Meanwhile, “many outlets for rubber infill have closed” in Europe because of adverse media coverage saying the material is dangerous to people’s health, Cinaralp said. The U.S. tire rubber market knows this problem all too well, said ISRI President **Robin Wiener**. “Despite the fact that there are 100 different



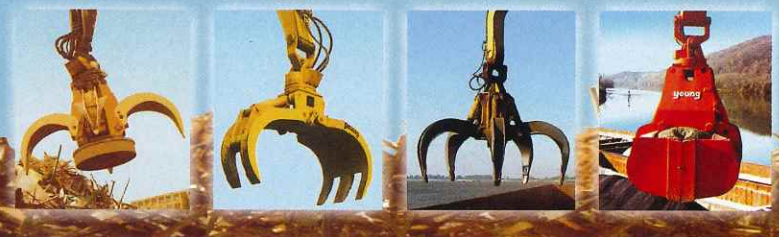
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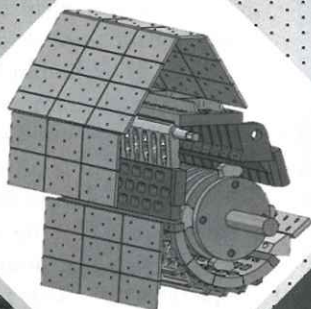


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studies issued by NGOs, governments, and academia that there isn't a safety risk," the U.S. market shrunk about 30 percent over the last two to three years, Wiener said. ISRI is part of a coalition working to promote use of the material.

ISRI is awaiting the results of a multi-agency U.S. study on potential risks. "A lot of governments, both state and local, are waiting for this report before taking action and allowing use of [this] material," she said. ISRI has asked that the report include conclusions "in plain language that clearly explains the substances of concern, what the relative risk is, and how that compares to acceptable risk. This is so parents, media, and policymakers understand the real risk—or lack of risk," she said. Gary Champlin of Champlin Tire Recycling (Concordia, Kan.) added that tire recyclers both in the United States and abroad want to "keep the focus on the science" rather than "letting emotion take over."

Despite the science, a "significant number" of European municipalities have decided not to use crumb rubber infill in artificial turf fields, Cinaralp said. Of the 3.3 million mt of end-of-life tires generated in Europe in 2016, 1.4 million mt went to granulated rubber applications, but end-of-life applications for the material "remain a challenge," she said. Tire recyclers need more diverse and robust uses for their tires, and asphalt rubber has "the most potential" as a new market for granulated rubber in Europe, she said. Europe can learn from the way the market has gained traction in the United States, where several states have roads paved with the material and proponents have been able to prove that the material makes roads last longer, she said. "All the benefits of rubberized asphalt are known," she said. ISRI has promoted the environmental advantages of rubberized asphalt for many years, and ISRI plans to "push for incentives for asphalt rubber" as Congress prepares

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an infrastructure reform plan, Wiener said.

E-SCRAP COMPLIANCE COSTS ARE SIGNIFICANT

Electronics recycling companies in Europe could save a significant amount of money if they did not have to meet such extensive compliance require-



ments, according to a study commissioned by the European Electronics Recyclers Association (Arnhem, Netherlands). **Federico Magalini**, managing

Federico Magalini director of Sofies UK (London), presented the study's findings at the E-Scrap Committee meeting. The research looked at the current e-scrap business model in Europe and focused specifically on operational costs. Recyclers that comply with a long list of requirements face costs that eat into margins, the report said. If companies did not have to meet such quality and service requirements, such as reporting to authorities or compliance schemes, they could cut costs by about 20 percent in the case of recycling cooling and freezing equipment and CRTs. "The effect of avoided compliance costs is much larger than [profit] margins," he said. This could make businesses more competitive, but it does not address the possible detrimental effects of avoiding compliance, he noted.

In a report to the committee, **Surendra Borad** of Gemini Corp. said e-scrap



volume in India could grow 10 percent per year between 2017 and 2020. India generates about 2 million mt of e-scrap each year, 70 percent of which is computer equipment.

Surendra Borad India only has the capacity to process 20 percent of the e-scrap it generates each year, he said. ■

Megan Quinn is reporter/writer for Scrap.



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