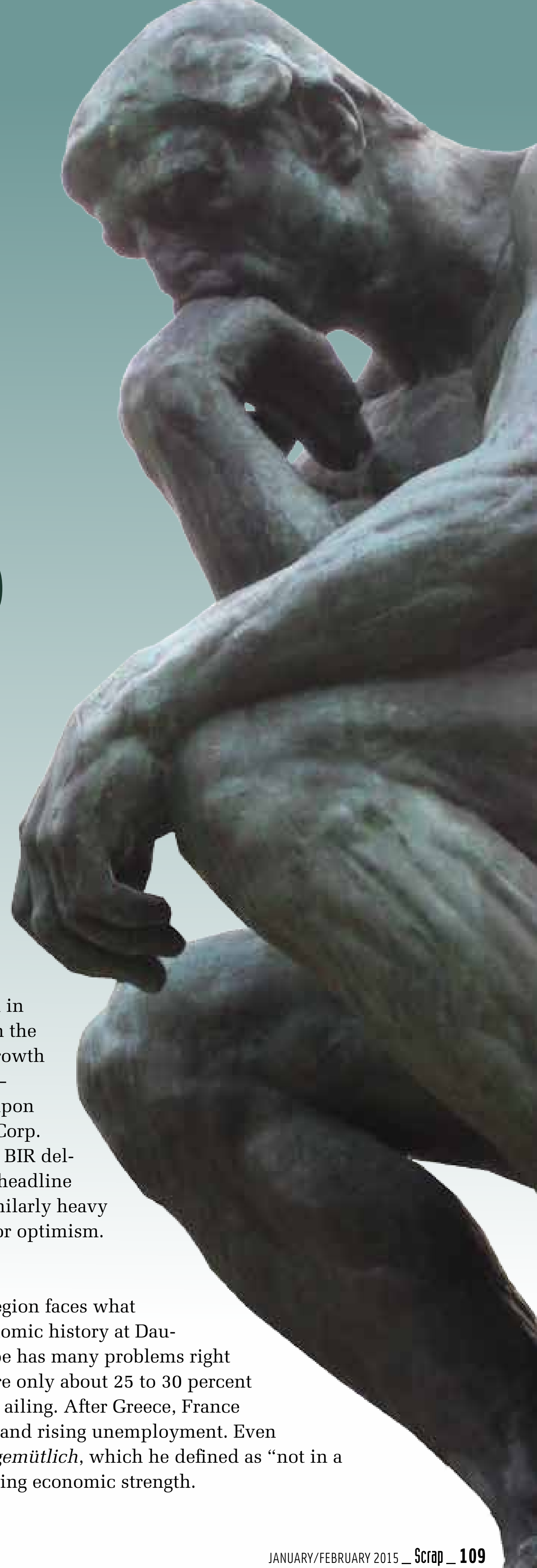
HEAVY THOUGHTS



ECONOMIC CONCERNS—MAINLY ABOUT CHINA AND EUROPE—AS WELL AS ONGOING DIFFICULTIES CAUSED BY PROTECTIONISM, SCRAP THEFT, AND TRADE FRAUD WEIGHED ON THE MINDS OF INTERNATIONAL RECYCLERS AT BIR'S FALL MEETING IN PARIS. **BY KENT KISER**

One casting of *The Thinker*, Auguste Rodin's famous sculpture, perches atop a pedestal in the Rodin Museum's garden near the heart of Paris. The sculpture's depiction of an individual deep in thought could symbolize the pensive mood of attendees at the fall meeting of the Bureau of International Recycling (Brussels), held in Paris in late October. Their reflective, somber mindset stemmed from the economic cloud hovering over many regions. Despite encouraging growth in some areas—particularly the United States and United Kingdom—"recession in many of the industrialized economies of the world is upon us," said Nonferrous Division president **Robert Stein** of Alter Trading Corp. (St. Louis). While Europe's weak economic outlook concerned many BIR delegates and speakers, China's recent slowdown was the event's main headline due to its far-reaching effects on scrap markets around the globe. Similarly heavy news in most of the BIR market reports gave delegates little reason for optimism.

NONFERROUS DIVISION DWELLS ON ECONOMIC WORRIES

The economic situation in the eurozone is "quite worrying" as the region faces what could be a triple-dip recession, said **Philippe Chalmin,** professor of economic history at Dauphine University (Paris), at the Nonferrous Division meeting. "Europe has many problems right now," he said, noting that requests for residential housing permits are only about 25 to 30 percent of the record levels seen in 2006-2007, and the automotive market is ailing. After Greece, France is probably Europe's weakest link, with lower industrial production and rising unemployment. Even Germany—usually the "driving force" in continental Europe—is *ungemütlich*, which he defined as "not in a very hopeful mood." Only the United Kingdom is showing encouraging economic strength.

KENT KISER

The coming year isn't looking much better for the eurozone, Chalmin said, forecasting only 0.5 percent growth in 2015. "We are, in effect, around zero growth." A weaker euro—then valued at about US$1.20—would be good news for Europe, he added, asserting that "a strong euro is a danger for Europe."


Alessandro Giraudo

Alessandro Giraudo, world group chief economist of Tradition-Viel Group (Paris), warned that "we are probably creating a Ponzi scheme" in which governments continue borrowing to finance economic growth. Despite the strong support from central banks and governments, global growth is "very moderate," he said, and government debt now totals roughly $55 trillion. In his view, the world has entered "a new phase of the commodity cycle," with "very important movements" of commodities, stocks, and bonds likely to occur in the coming two to three years.

In his last report after almost eight years as president of the Nonferrous Division, Robert Stein noted that recyclers are facing tightness in scrap supplies, compressed margins, potentially fraudulent trading partners, and ongoing thefts from containers in international transit. "A vigorous due diligence of new trading partners can help avoid many of the risks inherent with some aspects of our trade and, in the end, provide cheap insurance that your trading partners are indeed legitimate," he offered. Stein urged scrap shippers to send details of their theft experiences to BIR. "This information helps to determine patterns of thefts and ports where it is occurring, and helps the international bodies develop a method of putting an end to the plague," he said. Unless shippers provide such information, "the opportunity to right the wrongs is lost."

In an overview of key nonferrous scrap markets, **Alexandra Weibel-Natan** of MANCO (Le Perreux sur Marne, France) reported that conditions in Europe remain "very hard," as most countries face an "inexorable rise in unemployment" and a "decline in the purchasing power of households." In the fall, consumers took advantage of a rise in scrap stocks to postpone deliveries to a just-in-time basis, she said. Demand for aluminum and copper scrap has centered on high-grade material, though there seems to be "no more demand for brass."

China's imports of copper, copper alloy, and aluminum scrap have fallen significantly in the past year, and the "lack of momentum" in its economy—as well as the protests in Hong Kong—affected its stock and commodity markets, Weibel-Natan said. In India—which has seen a "large drop in overall traded volume"—funds are tight and margins are "very thin," she added. India's growing automotive and telecommunications sectors might signal its future economic strength, however.

The U.S. market has benefited from low interest rates and exhibited "robust" demand for most grades, but plentiful scrap supplies have prompted some consumers to try to lower prices, Weibel-Natan said.

Patrick Verschelde, president and CEO of Metallum Group Holding (Antwerp, Belgium), provided a "deep-dive look" at China's role in the global copper market. Its share of refined copper consumption rose from 16 percent in 2001 to 43 percent, or 8.9 million mt, in 2013. On the copper production side, China will "very soon" produce enough refined copper for its own use, which would reduce its imports of cathode


Patrick Verschelde

TIRES GROUP WELCOMES NEW CHAIRMAN

The Tires Committee meeting in Paris began with a historic change of leadership when **Barend ten Bruggencate** of VACO (Alkmaar, Netherlands) retired as chairman after 18 years in that role. BIR president **Björn Grufman** of MV Metall Vaerden (Stockholm) thanked ten Bruggencate for his "dedication, commitment to BIR, and relentless efforts to establish a strong Tires Committee within our international organization." Fellow Dutchman **Ruud Burlet** of Rubber Resources (Maastricht, Netherlands) became the committee's new leader. He expressed interest in making the group—renamed the Tires & Rubber Committee—a commodity division within BIR and increasing attendance at future meetings.


Ruud Burlet


Jean-Pierre Taverne

Jean-Pierre Taverne, coordinator for environment and ELT technical support of the European Tyre & Rubber Manufacturers' Association (Brussels), reported that Europe generated about 3.4 million mt of used tires in 2012, with about 653,000 mt going to the retreading, reuse, or export markets, 162,000 mt lost to land disposal or unknown ends, and the remaining 2.6 million mt recovered within Europe. Of the 2.6 million mt recovered, 1.26 million mt was used as tire-derived fuel—primarily in cement kilns—and 1.34 million mt was used in material recovery applications, with 1.18 million mt recycled and 157,000 mt used in civil engineering projects, he said. From 1996 to 2012, Europe reduced the amount of landfilled tires from 49 percent to 5 percent and increased the portion of tires used for material recovery from 11 percent to 39 percent and the portion for energy recovery from 20 percent to 37 percent.

Burlet also described his company's operations, which devulcanize retread peelings and butyl rubber inner tubes, turning them into recycled products for a variety of applications. BIR's Paris meeting also offered an in-depth workshop in which six experts reviewed various aspects of and developments in tire and rubber recycling.

in the future, he said.

China imported about 5 million mt of copper scrap in 2012, with Europe and North America the top two suppliers, at 1.7 million and 1.15 million mt, respectively, Verschelde said. China's goal, he asserted, is to increase the scrap content of its refined copper production from the current level of about 30 percent to 50 percent, which might not be achievable due to limited scrap supplies.

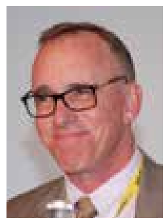
On the supply question, Verschelde said the global copper scrap supply will grow to 10.5 million mt by 2017, with obsolete scrap constituting roughly 9.5 million mt and new scrap making up the balance. By region, the major suppliers will be Western Europe, providing 2.7 million mt, followed by North America, 2.3 million mt, and China, 1.6 million mt. China's copper scrap supply will grow the most from year to year, with an estimated 10.5 percent annual growth rate from 2012 to 2017. North America's annual growth rate will be 0.5 percent and Western Europe's, 1.1 percent, in that period.

"China will continue to import and require a lot of scrap to 2016 and 2017, so there will be pressure on prices," Verschelde said. Even so, he expects copper prices to become less volatile because the supply-demand balance will favor supply starting in 2018 and because a lot of hedge funds have exited the commodity market.

In a roundtable discussion by the three guest speakers, Chalmin asserted that roughly 6 percent annual growth in China is equivalent to zero growth in Western countries because China needs at least that level of growth to meet its goal of creating 20 million new jobs annually. He added that zero economic growth might be the future for developed regions like Europe and the United States. Japan has had essentially zero economic growth for 25 years, which shows that such a state is "doable" for other nations, Chalmin said.

CHINA'S STEEL EXPORTS SKEW THE FERROUS MARKET

The Ferrous Division kicked off its meeting with a leadership transition, as **Christian Rubach** of TSR Recycling (Bottrop, Germany), chairman for the past eight years, passed the baton to **William Schmiedel** of Sims Metal Management Global Trade Corp. (New York). The meeting's guest speakers addressed the global steel market and the nuts and bolts of mergers and acquisitions.



William Schmiedel

World steel demand is facing a "more moderate growth trend" of about 2 percent a year in 2014 and 2015, primarily due to weaker economic growth in China and other major emerging markets, said **Hans Jürgen Kerkhoff**, president of the German Steel Federation (Düsseldorf, Germany). Even though the economies of developed countries have grown more than those of emerging markets in 2014—the first time that trend has occurred in the new millennium—"the weaker growth in the major emerging markets cannot be compensated by the improved development in the industrial countries," he stated. Emerging markets still have "strong, long-run potential for growth," but they also present more risks, which could increase market volatility in the future.

Hans Jürgen Kerkhoff

China's recent low-growth trend might be a "new normal" for its economy and its steel sector, as the government focuses more on economic rebalancing and less on growth, Kerkhoff said. "The government will not actively stimulate the economy as it did in the past." He also questioned whether China's steel sector is reaching the "saturation point," which could make overcapacity a bigger issue going forward.

The "bumpy recovery" taking place in the European Union will continue due to the weaker euro, tenuous financing conditions, and higher unemployment, Kerkhoff said. Any recovery will take place from "an extremely low level" and progress in "very small steps." Eurofer (Brussels) expects apparent steel use in the EU to grow 4 percent in 2014 and 3 percent in 2015, he reported.

One obstacle for the global steel industry is growing protectionism. "Free and fair world trade for steel, unfortunately, today is not reality," Kerkhoff said. "There's a growing concern that more and more countries are giving their steel industries competitive advantages by introducing various types of trade barriers." Countries with protectionist measures produce roughly 65 percent of the world's steel, which has led to a "sealing off of important steel markets and to an increase of steel flows to the open EU steel market."

This "bad behavior" also affects scrap, Kerkhoff said, with more than 20 countries imposing trade barriers on steel scrap and other steelmaking raw materials. Such rules are "blocking free access to raw material markets and distorting the competition with steel companies in these countries," he said, adding, "We must rely on free and fair markets."

Björn Voigt, managing partner of Active M&A Experts (Düsseldorf, Germany), provided a primer on the merger-and-acquisition market. The top three markets for M&A activity in the first three quarters of 2014 were North America (€1.3 trillion), Europe (€758 billion), and the Far East/Central Asia (€608 billion). In Europe, the United Kingdom was the most active in M&A activity in 2014, followed by Germany and France. The business services sector posted the most M&A activity in the first three quarters of 2014, with banking/financial services and industrial machinery rounding out the top three, he said.

IEC LOOKS AT TRANSBOUNDARY MOVEMENT OF USED ELECTRONICS

At the meeting of BIR's International Environment Council, **Eric Harris**, ISRI's associate counsel and director of government and international affairs, discussed recent developments regarding the draft technical guidelines on the transboundary movement of used electrical and electronic equipment, with a particular focus on the distinction between waste and nonwaste under the Basel Convention. The current draft provides two options for defining conditions that allow the export of nonfunctioning used electronics for repair, refurbishment, or remanufacturing. The first option has a set of specific conditions under which nonfunctional, used electrical and electronic equipment normally would not be considered waste and thus could be exported. In the other, "fall-back" option, Harris said, parties to the agreement would be able to define the conditions under which such nonfunctional equipment would not be considered waste and should inform the Basel Convention secretariat about any such conditions. The draft guidelines are expected to be completed by the next Conference of the Parties to the Basel Convention in May 2015.

Eric Harris

A company's readiness to pursue a merger or acquisition can depend on macroeconomic conditions, access to financing, interest rates, the level of taxation on company sales, and projected inflation or stagnation, among other factors, Voigt said. Sellers can make their companies more attractive in the market by decreasing their debt, increasing working capital, selling noncore activities, closing losing operations, resolving environmental problems, providing approved balance sheets, and offering a state-of-the-art reporting system, he noted. To establish a value for the company, owners can use the discounted cash flow method or real-life multiples method. In the United States in 2013, he said, the average multiple was four to six times a company's earnings before interest and taxes.

For buyers and sellers, Voigt said, common pitfalls in the M&A process include merging companies that are a poor strategic fit or that have clashing corporate cultures, failing to do the proper due diligence, not allocating enough resources for the merger to succeed, betting the whole company on the deal, and—most critical—failing to properly integrate the companies after the merger.

In the ferrous market reports, William Schmiedel noted that China's steel production overcapacity, a decline in its domestic steel consumption, and low global iron ore prices prompted it to boost its exports of finished and semifinished steel to record levels, causing "a substantial negative correction for the ferrous scrap market worldwide" in 2014. Iron ore prices likely will remain depressed for the foreseeable future, and China's economic growth is expected to remain weak into 2015, although the Chinese government could implement a monetary stimulus program and ease restrictions on the country's ailing real estate market to bolster steel consumption, he said.

China's record steel exports have caused many ripple effects throughout the global steel and ferrous scrap markets. Steelmakers in Taiwan, for instance, reduced their purchases of ferrous scrap shipments, choosing instead to buy inexpensive Chinese billets, Schmiedel said. South Korean mills are taking a "wait-and-see approach as their inventory levels are adequate," and that market's prices for imported and domestic scrap have adjusted downward.

The markets in Thailand, Malaysia, and Indonesia have been "very quiet," although mills there have filed anti-dumping cases against Chinese steel of all kinds, Schmiedel noted. China's steel exports, in fact, could bring about "an entirely new wave of protectionism that will be legislated by many countries against China," he stated.

Even though Japanese mills expect to have the same production in the second half of 2014 as in the first half, they plan to dramatically reduce their purchases of domestic scrap due to the availability of lower-priced pig iron, said **Hisatoshi Kojo** of Metz Corp. (Tokyo). China's steel exports will continue to affect the Asian market significantly, he said, although he expressed some optimism that mills might start building their scrap inventories based on the realization that "the current market prices are really reasonable."

India is on track to import 4.25 million to 4.5 million mt of ferrous scrap in 2014, up from the 3.8 million mt imported in 2013, but down from the 6.9 million mt imported in 2012, reported **Zain Nathani** of the Nathani Group of Cos. (Mumbai). Limiting India's ferrous scrap purchases are import duties on ferrous scrap, the nation's volatile currency, the higher availability of domestic scrap, greater use of domestically produced direct-reduced iron/sponge iron, and weakness in its economy and key steel-using sectors, he said. The United Arab Emirates is the largest supplier of ferrous scrap to India, providing 18 percent of the total, followed by South Africa, the United Kingdom, and the United States. Those top four supplying countries contribute almost 60 percent of India's total steel scrap imports, Nathani said.

The U.S. market saw ferrous scrap prices decline in October and November, even as U.S. crude steel production remained on track to grow 7 percent in 2014, to 102 million tons, thanks to strong growth in the automotive and energy sectors, Schmiedel said. Equally positive, U.S. steel demand is expected to increase 2 percent in 2015, he noted.

EU ferrous scrap recyclers experienced "quite a downturn" in the second half of 2014, mainly due to low iron ore prices and higher exports of Chinese billet, which forced steel scrap prices down across the EU, said **Tom Bird** of Mettalis Recycling (Sheffield, England). Chinese mills reportedly were selling billet as "square bar" to circumvent the Chinese government's taxes on billet exports. Scrap operating levels in the EU were "well below capacity" in the fall, and margins remained under pressure, he said, adding that tight scrap supplies "should keep a base on the market." In the bigger picture, the EU and the European steel industry face "less-than-encouraging macroeconomic growth figures" going forward. Even so, Bird expressed confidence that "we may have reached—or are not far from—the bottom."

Although the Russian domestic market was "quite strong" early in 2014, ferrous scrap prices started decreasing in October, reported **Andrey Moiseenko** of Ukrmet (Doneck, Ukraine). Gale-force winds and low water levels hindered scrap shipments from certain Russian ports, causing many exporters to close their operations at the ports, even as Russia reduced the export tax to 10 percent, he said. Russian exports of steel scrap for all of 2014 were projected to be lower than in 2013. With the coming winter expected to be "quite cold," scrap collections likely will decrease.

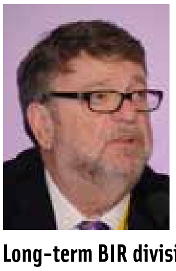
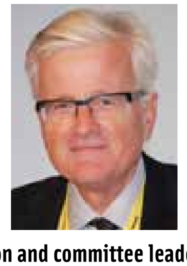
Ukraine's market situation has been "quite complicated" due to the military action in the eastern part of the country, Moiseenko said. Ukraine's two largest steel mills, which previously consumed about 100,000 mt of ferrous scrap monthly, are not operating. Even though scrap prices have managed to remain stable, collections in all areas have decreased, he noted.

ASIA MONOPOLIZES STAINLESS DISCUSSION

After electing a new chairman—**Joost van Kleef** of KMR Stainless (Dordrecht, Netherlands)—the Stainless Steel & Special Alloys Committee had three speakers address Asia's influence on the stainless market. As **Bharat Mandloi**, managing director of Cronimet ABCOM (Singapore), put it, "Asia definitely drives the stainless steel market on a global basis," and China—the world's largest producer of stainless steel—is the dominant player. China has about 70 stainless steel mills that produce roughly 20 million mt of stainless steel, or about 50 percent of global output, said **André Reinders**, managing director of Nicrinox (Dubai, United Arab Emirates). Stainless scrap, however, is only about 30 percent of the raw material in China's stainless production—a scrap utilization rate that's much lower than those of U.S. and European mills, Mandloi said. Instead, China relies on nickel pig iron to make its stainless steel. China's use of NPI has reduced its demand for scrap and "ramped up its [stainless] production in a big way," he said. "NPI has over the last few years changed the global production economics of stainless steel."

Bharat Mandloi

Prior to 2014, China imported roughly 15 million mt of nickel ore a month to make NPI, with high-quality Indonesian nickel ore about 80 percent of that total, Mandloi said. Despite Indonesia's ban on exports of nickel ore—implemented in January 2014—China's NPI production is projected to reach 470,000 mt in 2014, almost the same as in 2013. The question now is whether China has worked down its inventories of nickel ore and will seek to rebuild its nickel supplies, Mandloi said. Indonesia, for its part, plans to open several plants to convert its nickel ore to NPI, which it will export. "We will see a change in the dynamics of the NPI and scrap markets in 2015," he said. For China, this could mean "the era of cheap nickel" is over, said **Tobias Kämmer**, managing director of Oryx Stainless (Mülheim an der Ruhr, Germany).


Long-term BIR division and committee leaders Robert Stein, Christian Rubach, and Barend ten Bruggencate stepped down from their leadership posts at the Paris meeting after a combined total of 34 years of service to the international association.

If that's the case, could China become a big buyer of stainless scrap? The speakers offered differing opinions. Kämmer asserted that "the importance of stainless scrap will increase in China in the coming years," but Reinders argued that China now supplies "roughly 98 percent of its own scrap, so [it doesn't] need our scrap anymore." In fact, he said, China could even export stainless scrap if it weren't for the Chinese government's 40-percent export tax on the material.

Tobias Kämmer

For the past two years, India has been the largest importer of stainless scrap in Asia, Mandloi said. India makes about 2.4 million mt of stainless a year, primarily in induction ovens—which can use almost 100-percent scrap as feedstock—rather than electric-arc furnaces because the capital investment is much lower, Reinders explained. Instead of trying to compete in the flat-products sector, India has established a "niche market" for itself in long products, Mandloi said. Currently, India is a great market for small to midsized stainless scrap sellers because the operators of induction ovens can buy smaller quantities of scrap, Reinders said. India also holds great promise for growth in stainless use because it only uses 1.2 kilograms per capita—much less even than China's use of 10 kg per capita, he noted.

The ASEAN market—countries in the Association of Southeast Asian Nations—also deserves attention, in part because those countries generate an estimated 350,000 mt a year of stainless scrap, Mandloi said. Although the region has four major cold-rolling facilities, there's no large stainless melt shop in Southeast Asia, so its stainless scrap is shipped to consumers in China, India, Japan, South Korea, or Taiwan, he pointed out. ASEAN scrap shippers benefit from short transit times and low freight rates when selling to other Asian consumers. "This creates a very, very interesting and very dynamic spot market business because we have the ability to deliver material within a period of a week or 10 days," Mandloi said.

The stainless scrap story in 2014 wasn't exclusively about Asia, however. Europe served as a positive market driver in the first half of the year, and the United States provided solid demand throughout the year, Kämmer said. European stainless scrap even flowed for the first time to the United States due to "significant price differences" between the two regions, he noted. "The U.S. continues on its way to [becoming] a leading stainless scrap importer."

The production of NPI will be lower in 2015—"that is absolutely clear," Kämmers said—which could help support nickel's flagging price. In his view, LME nickel no longer serves as "a product for the stainless industry" because the price gap is too large between it and NPI and stainless scrap. "It's nice for the analysts, but not for our industry," he said. Reinders agreed that there has been a "decoupling" of the LME nickel price and nickel values in scrap. Going forward, he asserted, "the control of this market will be in the hands of China." Already, China has taken aggressive steps to affect the market price of iron ore and ferro-molybdenum—in part by listing them on its own commodity exchanges—and it likely will try to keep other commodity prices low in the future. Low prices are in its best interest as it continues to build its infrastructure and make quality-of-life improvements for its citizens. As a result, Reinders said, "we should get used to these lower prices because what is low today is probably going to be high tomorrow."

PLENTY OF PROBLEMS FOR PAPER

The overregulation of recycling and increased protectionism are among the "bouquet of challenges" paper recyclers face, said Paper Division president **Reinhold Schmidt** of Recycling Karla Schmidt (Haren, Germany) at the paper roundtable. Those two challenges "cause artificial barriers for free and fair trade of recovered paper and endanger our companies and economic growth," he said, arguing that recyclers "must combat this with all our force."

Reinhold Schmidt

Other problems for paper recyclers include lower margins, higher quality demands from paper mills, reduced demand for recovered fiber in China, and freight concerns. On that last point, Schmidt said container freight rates could increase due to new requirements—starting in January 2015—for shipping lines to reduce their sulfur emissions if they pass through certain sulfur-emissions-control areas. "At present this is only for certain limited regions, but we think that it will probably extend globally," he said. Adding to the freight discussion, **Ranjit Baxi** of J&H Sales International (London) said some shipping lines planned to reduce vessel capacity and raise rates as much as $300 a container in November. "Why is it we are facing a freight increase at a time when we are noticing some of the lowest oil prices in a long time?" he asked. On the upside, however, some new large vessels—able to carry up to 10,000 40-foot containers—could come into service in 2015, which could increase available vessel space and reduce freight rates, Baxi said.

Ranjit Baxi

Noting one final challenge, Schmidt observed that the "economic barometer in many parts of the world is continuing to go down," but recyclers shouldn't be discouraged, he said. Working with BIR and other associations, recyclers can meet these challenges wisely. "If we are able to do so, then we will have very good opportunities to continue to be active and successful in our markets," he said.

Providing a closer look at China's changing market dynamics, Baxi noted the global economic slowdown has reduced China's paper and board production growth from roughly 10 percent annually to about 3 percent. Chinese mills' procurement policies now are focused on how to decrease production costs and improve the running time of their machines, he said.

Growing environmental awareness in China and new government policies are helping that country increase its collection of recovered paper, Baxi said. China is educating paper collectors to help them create recovered paper grades that meet the specifications of Chinese mills, he noted.

Paper quality, in general, remains the "central theme" for Chinese mills in deciding where to buy their recovered fiber. From 2011 to 2013, China's imports of recovered fiber rose 16 percent, from about 27.3 million mt to 31.6 million mt, Baxi reported. The United States and Europe were the top two suppliers in that period, with U.S. shipments to China increasing 22 percent, from 13.1 million mt to roughly 16 million mt, and Europe's shipments growing 9 percent, from 8.2 million mt to about 9 million mt, he said. Fiber quality and possible freight advantages are two factors that could explain the U.S. market position.

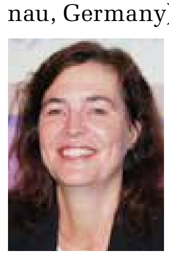
In the first eight months of 2014, U.S. shipments to China declined 2 percent compared with the same period in 2013, while Europe's shipments slipped 6 percent, Baxi said. Projecting an annual total based on the January-to-August figures, China's recovered fiber imports could total roughly 28 million mt in 2014, which would be a 12-percent decline from 2013. "All of you must be looking at new markets," Baxi told the audience. "It is a time for us to look at other, alternate markets if we are to sustain the European business volume."

In a report on Eastern Europe, **Jaroslav Dobes** of Remat (Brno, Czech Republic) voiced concerns about lower collection of recovered fiber. The Czech Republic, for one, saw declines in both the consumption of paper products and collection of secondary fiber, which means "no stocks are being built." Consumption of scrap paper had dropped 9 percent by the fall despite a moderate increase in paper production, while fiber exports increased 2.5 percent. Overall the "business is unstable, and price developments are proving unpredictable," Dobes said. In Turkey, September brought a minor increase in recovered paper demand and a 10-percent boost in prices, but the onset of winter is expected to reduce collections.

The market in Northern Europe saw "generally stable" conditions in the second half of the year, said **Lars-Gunnar Almryd** of IL Recycling (Solna, Sweden). Sweden had healthy demand for old corrugated containers, news grades, and tissue grades, and mills managed to maintain "decent stock levels" of those grades despite a seasonal decline in collection volumes of tissue grades. Paper mills in Finland also have shown steady demand for secondary fiber, thanks in part to only a few "short stoppages for maintenance," he said. Stora Enso's (Helsinki) announcement that it will use OCC in new board production at its mill in Varkaus, Finland, could boost its OCC demand by 100,000 mt a year, a quantity that would affect the market in Northern Europe, Almryd said.

In Southern Europe, even though collection volumes were "extremely low" in the summer, prices remained stable, **Merja Helander** of Lassila & Tikanoja (Helsinki) reported. In the fall, however, Spanish buyers reduced their buying prices on brown grades by €10 a mt due to lower production at mills "whose competitiveness in the export market has been compromised by the new national energy regulation," she said. In Italy, lower paper and board imports boosted orders at domestic mills in August, making domestic recovered paper prices competitive with export orders. Italy's exports of scrap paper were lower compared with the same period last year mainly due to reduced demand from China.

Christina Dornack, raw materials and recycling department head of Papiertechnische Stiftung (Heidenau, Germany), discussed the results of a study her group conducted on paper sorting and quality. The study focused on recovery of the European grade 1.11, sorted graphic paper for deinking, which consists of "sorted graphic paper from households, newspaper, and magazines." As background for her report, Dornack reviewed the dramatic changes in the newsprint market. The consumption of newsprint in the United States decreased 54 percent from 1992 to 2011, and it is expected to decline 47 percent from 2010 to 2020, she said. Europe's consumption of newsprint is projected to decrease 56 percent from 2008 to 2020. U.S. production of newsprint and graphical paper, meanwhile, has declined 26 percent in the past 10 years compared with its production of packaging and board, while European production has declined 21 percent based on the same measures, she noted.


Christina Dornack

Based on these changing dynamics in the newsprint and graphical paper markets, recyclers will see changes in the paper mix entering their plants, Dornack said. Such changes will include less deinking material in household collections, more corrugated, a lower ratio of newspapers to magazines, and more paper that currently is not suitable for recycling, such as paper with high wet strength, she said. Other factors that will reduce the value of deinking material include new paper-finishing trends, more nonpaper impurities, and a lower proportion of first-generation fiber. The results of these changes are less value in the sorted material and lower available quantities of the 1.11 grade—both of which will make it more difficult for paper sorting facilities to survive, she said.

Paper sorters can turn the tide by using "extensive automation" to achieve higher productivity, producing more higher grades, sorting out high-quality packaging material, and implementing quality controls on their final product, among other steps. "Business as usual won't work for most plants in the long run," Dornack concluded.

The meeting's other guest speaker, **Sébastien Ricard** of Paprec Group (Paris), provided a brief summary of the French paper recycling market, noting that prices have been "relatively stable."

PLASTICS LOOKS BEYOND CHINA

At the Plastics Committee meeting, Chairman **Surendra Borad** of Gemini Corp. (Antwerp, Belgium) began by noting that European plastic recyclers can export their scrap to only 74 of the world's 196 countries due to the European Commission's regulation 1418/2007, which denies EU recyclers access to potentially valuable markets. In contrast, U.S. recyclers traded with approximately 160 countries in 2013, he said, quoting ISRI statistics. The EU process that determines which countries are acceptable trading partners is "a sheer waste of energy and resources," he said, arguing that "it's ridiculous to have such burdensome administrative procedures."

In the market updates, **Steve Wong** of the China Scrap Plastics Association (Beijing) reported an oversupply of various recovered plastics in China, particularly plastics from end-of-life electronics. That material often contains brominated flame retardants, which makes it fail the EU's RoHS test as well as manufacturers' safety and quality requirements, he said. There's also lower demand for engineering plastics due to China's weak economy. In addition, Chinese plastic recyclers face a labor shortage, which Wong blamed in part on the nation's one-child policy. Chinese recycling companies commonly must pay US$1,000 to recruit workers, he said. "The future is a challenge in our business in China," Wong said, adding that recyclers must "find a way to add value and find the best way to recycle material at the cheapest cost to be more efficient in order to survive."

Steve Wong

Wong also reported on several changes in the plastic recycling market related to Chinese government actions. For one, the government is cracking down on recycling facilities that lack the necessary equipment—such as water treatment systems—to operate in an environmentally sound way. In addition, beginning in January 2015, the Ministry of Environmental Protection will no longer handle applications from importers seeking approval of imports of preapproved "solid waste." Instead, importers must apply to their municipal environmental protection department to get approval from the provincial government. China's Ministry of Justice has refined its definition of smuggling, Wong added, to include any situation in which a customs inspection discovers prohibited items being imported; forged customs declarations; or materials imported under the name of other, irrelevant tax-free or low-tariff items for sale within China. Chinese Customs also has proposed cancelling the zero-tariff preferential treatment for scrap plastics that are imported, recycled into raw materials, and eventually turned into products for export.

Despite China's oversized role as an international scrap buyer, "all roads have not been leading to China and Hong Kong," Borad noted. The Indian market, for one, has been "very buoyant" in recent months, with demand greatest for LDPE, LLDPE, and PET. Even though prices for recovered plastics have declined as lower oil prices have driven down prime resin prices, "we expect a stable, consistent market in India," he said. Only a limited number of Indian companies have licenses to import plastic scrap, and they have "used their monopolistic position to take great advantage of the situation," Borad said. "Their profit margin has been exceptionally high." Fortunately, he noted, India's new government is focused on reducing administrative processes, giving hope that there will be "more licenses for importing into the country."

In the United States, the mood is bullish and there is a "substantial scarcity" of raw materials, primarily due to higher domestic consumption. "I expect the market to remain very strong in the coming period in the USA," Borad said.

In Europe, the third quarter has shown the same strong demand as was seen at the beginning of 2014, particularly for postconsumer and postindustrial PP and HDPE, reported **Grégory Cardot** of Veolia Propreté France Recycling (La Plaine Saint Denis, France). Prices have remained stable despite the downward trend in virgin resin prices, primarily due to lower scrap availability. The trend started to change in October, however, with scrap demand slowing and converters buying material on a just-in-time basis. European exports of plastic scrap have been good, meanwhile, with strong demand and prices, buoyed by the tighter scrap supply situation.

Michel Loubry, regional director of the west region for PlasticsEurope (Puteaux, France), argued that Europe should strive to end the landfilling of postconsumer plastics by 2020. As of 2012, the EU countries, plus Norway and Switzerland, recycled 26 percent, or 6.6 million mt, of their postconsumer plastics; burned 36 percent, or 8.9 million mt, of such plastics for energy recovery; and landfilled the remaining 38 percent, or 9.5 million mt, he said. The landfilled portion is "definitely what we want to change," Loubry stated.

Michel Loubry

Nine European countries already ban landfilling postconsumer plastics and recover more than 90 percent of the material for recycling or energy, he said. All others continue to landfill at least one-third of their postconsumer plastics, with some discarding two-thirds or more. Five countries—the United Kingdom, Italy, Spain, France, and Poland—are the source of 80 percent of Europe's landfilled postconsumer plastics. "If we achieve zero plastics to landfill in those five countries, we [will be] very close to the total result," he said.

Achieving the zero-landfill goal won't be easy, but Loubry is encouraged by the "acceleration" in the recovery of postconsumer plastics and the decline of landfilling in Europe in recent years. From 2006 to 2012, he noted, landfilled plastics decreased from 12.9 million mt to 9.5 million mt, while the amount recycled rose from 4.7 million mt to 6.6 million mt and the tonnage burned for energy climbed from 7 million mt to 9.1 million mt.

Naemi Denz, managing director of VDMA Fachverband Abfall und Recyclingtechnik (Frankfurt am Main, Germany), reviewed technical progress being made in sorting, shredding, and washing plastic scrap. "All plastic recyclers want to have a defined material quality" to meet customer specifications, she said. To meet that goal, recyclers must remove a variety of impurities from their recycling stream using magnets, sensor sorters, and ejection chutes. One recent innovation, she said, is sensor sorters with a self-cleaning feature that can reduce maintenance. She also noted developments in shredding and granulation technology for plastic scrap, some of which incorporate forced-feeding systems to press the material onto the rotor for optimal processing. Other developments in this area increase energy efficiency, particularly in energy-intensive stages such as shredding, washing, and drying, to respond to Europe's high energy costs, Denz said.

Naemi Denz

Sébastien Petithuguenin of Paprec Group (Paris) spoke about France's low plastic recycling rate. France's 130 plastics recycling facilities recycle about 20 percent, or 1.1 million mt, of the country's plastics, with postindustrial material roughly 800,000 mt of that total and postconsumer plastics the remainder. France has no deposit system for plastic packaging and has inexpensive landfill costs, which are disincentives to recycling, he noted. He also pointed out barriers that affect all plastics recyclers: Plastics are technically difficult to recycle because the numerous polymers can't be mixed, their widespread use can make them challenging to collect, and their volume compared with their weight can make transportation expensive. Petithuguenin reviewed his company's efforts to recycle plastics from old windows and PP storage sacks, as well as its conversion of PET bottles into food-grade recycled resin.

TEXTILES TOUCHES ON SHOE RECYCLING, THEFT REPORT

The Textiles Division offered its customary market reports as well as presentations on shoe recycling and the sustainability of Europe's clothing and textile recycling sector.

Mathieu Hestin, a project manager with BIO Intelligence Service (Neuilly-sur-Seine, France), noted that France recovered about 3 percent of the estimated 240,000 mt of end-of-life shoes it generated in 2010. About two-thirds of those recovered shoes went to the reuse market, while the other one-third was discarded, he said. Those figures reveal "large potential for improvement," Hestin said, noting that the United Kingdom already collects three to four times that amount. He reported the estimate that the component materials of these shoes—which include leather, rubber, fabric, and synthetic materials—could be worth an estimated €250 million.

Shoe manufacturers such as Nike, Okabashi, and Crocs have established and continue to fund the most prominent shoe recycling programs in the world, Hestin noted. These programs recycle old shoes into products such as carpet padding, sports surfacing, and new shoes. No initiatives recycle leather from end-of-life shoes, however. The Centre for Sustainable Manufacturing and Reuse/Recycling Technologies at Loughborough University (Loughborough, England) is testing a process that grinds old shoes and then runs the processed materials through manual and mechanical separation to yield sorted streams, he reported. The recovered leather could go into reformed leather sheets, the rubber into sports surfacing, the fabric into insulation, and the foam into underlayers. To ease future shoe recycling efforts, manufacturers should design shoes for recycling, especially by reducing their complexity and number of materials, Hestin said.

Andrew Gilbert, a marketing officer with the Waste & Resources Action Programme (Banbury, England), addressed ways to improve the sustainability of Europe's clothing and textiles sector, such as by raising public awareness of the need to prevent textiles from going to landfill, extending the life of clothing through better product design, and finding viable market options for lower-grade textiles.

Alan Wheeler of the Textile Recycling Association (Maidstone, England) presented highlights from various market reports. The U.S. textile recycling industry is at a "potentially transformative point in time," **Eric Stubin** of Trans-Americas Trading Co. (Clifton, N.J.) conveyed in a written report, noting the new "Clothes the Loop" clothing and textile recovery campaign in New York state that the New York State Association of Reduction, Reuse, and Recycling (Albany, N.Y.) and the Abingdon, Md.-based Secondary Materials and Recycled Textiles Association and Council for Textile Recycling launched in November.

In his report on the UK market, Wheeler noted that his association and its stakeholders completed a "groundbreaking" report on the scale of theft of used clothing and textiles in London. Among the "good news" in the report is that less than 2 percent of clothing is being stolen from door-to-door collections in London—a much lower level than a few years ago, he said—and collections by bogus charities are "minimal." Although thefts from textile banks (or bins) seem to be higher, at about 11 percent, that figure is lower than previous estimates, he said. The report had recommendations on how to reduce thefts through textile bank design, collections, monitoring, and enforcement, Wheeler noted.

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