



Paolo Losso, *president and chairman of the board, Danieli Corp.*, welcomes attendees to the 2016 European Steel Forum.



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AIST European SteelForum2016 Review

by Sam Kusic

As the supposed Chinese curse goes, “May you live in interesting times.”

While it’s uncertain as to whether the saying actually is of Chinese origin, these clearly are interesting times for the steel industry.

Consider: excess capacity continues to pose a significant problem, and although the world’s largest industrialized countries have recognized the issue, there doesn’t appear to be any near-term solutions in the offing. Meanwhile, the global economic outlook remains lackluster, and given recent political events in the United States, the United Kingdom and, most recently, Italy, new elements of uncertainty have been introduced to the markets. And if that isn’t enough, steelmakers are under pressure from competing materials and requirements to lower carbon dioxide emissions.

As United States Steel Corporation chief executive Mario Longhi put it:

“The current environment, in my view, probably (presents) our industry with the most challenging conditions that we’ve seen, especially in North America, in the last 50 years.”

That said, 2016 offered an improved view over 2015, and, perhaps, a greater recognition that industry participants, regardless of which side of the Atlantic they are on, are confronting the challenges together.

Those challenges, and the solutions to them, drove much of the discussion during AIST’s annual European Steel Forum, which took place 20–21 October 2016 at the Danieli headquarters in Buttrio, Italy.

During the two days, producers, mill suppliers, and academics from Europe and North America heard from top executives, swapped insights and business cards, and had a firsthand look at some newer steelmaking technology at work.

“This year’s event was characterized by a strong program that featured a mix of high-level representation of panelists from both steelmakers and equipment suppliers as well as keynote speakers that covered the whole spectrum of hot topics that characterize the metals industry nowadays,” said Paolo Losso, chairman and president, Danieli Corp., which both sponsored the event and hosted it at its international headquarters in northwest Italy.

“Danieli was honored to host ... the European Steel Forum at our headquarters in Buttrio. It was a great success, and Danieli is pleased to have contributed to such outcome.”

This was AIST’s fifth European forum, and despite the cloudy skies under which the industry finds itself, the conference drew 160 — its best turnout.

Part of that likely was due to the opportunity to tour facilities operated by Ferriere Nord S.p.A. and Acciaierie Bertoli Safau, Danieli’s steelmaking arm. Both facilities are among the most efficient and modern long products mills in Europe, Losso said, and each have unique process routes that make them stand out in their respective markets.

“This drove attendance to levels never experienced in the previous editions of the event,” Losso said.

The attendees had plenty to see, and they had much to take away from the conference. Following are a few of the highlights of the presentations and discussions.

Accept that the fundamentals have changed

When it comes to market fundamentals — basic supply and demand — the steel industry is now in a “new normal.” Therefore, producers can’t simply wait it out; they’ll have to adjust accordingly.

“We are facing the consequences of the 800 million tons of global overcapacity,” said

Danieli & C. Officine Meccaniche S.p.A. chairman and chief executive Gianpietro Benedetti, who pointed out that ABS’ 2015 production was down by about a third.

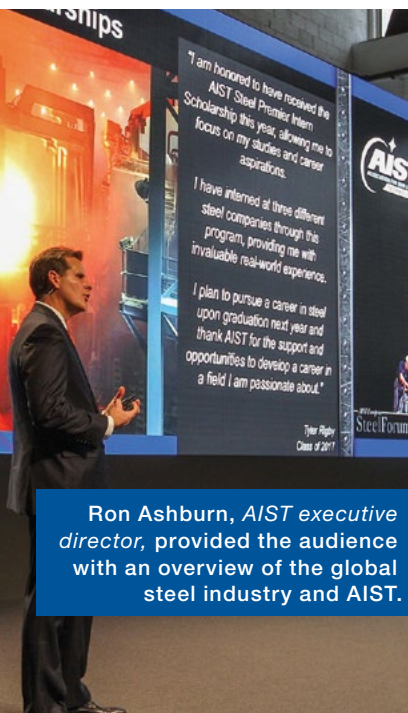
“We are living, in our opinion, in a new normal period that (may persist) for 5 to 10 years. So we are reorganizing ourselves culturally to be able to give other types of services to our customers — the means to implement technological packages, to help move toward digitalization, and to be able to support our customers in increasing quality and decreasing operating expense.”

Low-cost imports are part of the new landscape, but as Pierluigi Molajoni, a consultant and retired Techint Group economist who served as chairman of the World Steel Association’s economics forecasting committee, suggested, European steelmakers appear to have another problem: permanently reduced demand owing to a changed economy.

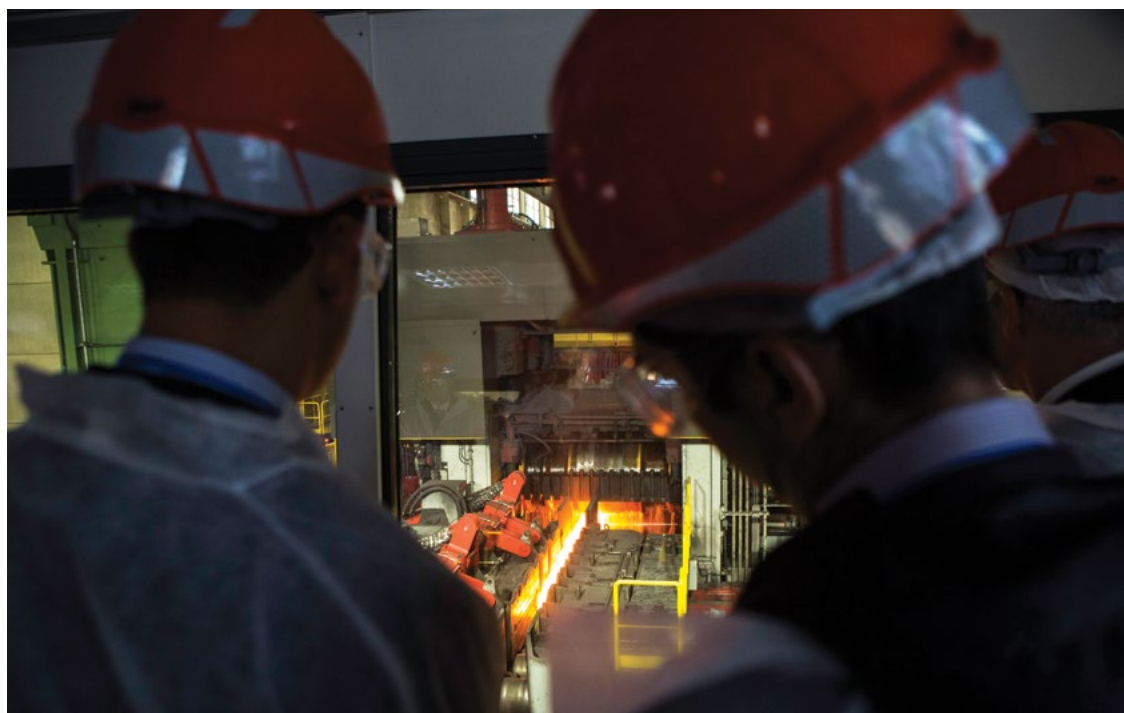
He said the EU’s steel intensity of gross domestic product — the amount steel used per unit of GDP — has declined from the beginning of the 2000s, and even more so since the Great Recession. While it has since stabilized, steel intensity appears to have settled into a permanently reduced level, he said.

He said that same decline can also be observed in the EU’s overall material intensity.

“Something very drastic has happened in this area of the world. I think Europe underwent a deep transformation. As GDP continued to grow, growth was more in the guise of non-material



Ron Ashburn, AIST executive director, provided the audience with an overview of the global steel industry and AIST.





The 2016 AIST European Steel Forum attendees at the conclusion of the program.

activities — telecommunications, financial services, insurance, real estate. Our style of life today does not have the steel intensity that it used to have.”

Promotion of steel's true value is needed

The market doesn't give steel its proper due, based on valuation. The industry needs to do a much better job of capturing the value it provides to those who use it.

Carl De Maré, an ArcelorMittal vice president who heads its technology strategy, said he's always frustrated that the industry sells hot-rolled coil for US\$500 per ton, and yet, a box of nails at the hardware store sells for an equivalent of US\$5,000 ton.

“Our product is so valuable, but we are not paid for it,” De Maré said, adding that steelmakers ought to be asking themselves how best to apply new technologies to capture more value from the supply chain.

Longhi echoed those comments, saying steel's value is indeed underrecognized, and especially so in the automotive market.

“We deliver something that ... people are not valuing anywhere near what it should be valued. And that is the context of safety. What we deliver to a vehicle, in terms of protection of the driver and other occupants, is by far the best solution that they could ever have. And I don't think there is an appreciation that is translated into value for the ones that really deliver that.”

He said steel needs to change the way it talks about itself — and presents its data.

“If you look at the way in which steel normally presents its data, it's still too centered on volume and tons, and it's not enough on value. (Steel's) fundamental value should become the topic that everybody talks about.”



Ron Ashburn, executive director, AIST, thanked the Industry Leader panelist for participating (left to right): Moderator: Nico Bleijendaal, vice president, key account management, Danieli & C. Officine Meccaniche S.p.A.; Mario Longhi, president and CEO, United States Steel Corporation; Carl De Maré, vice president and head of technology strategy, ArcelorMittal; Gianpietro Benedetti, chairman and CEO, Danieli & C. Officine Meccaniche S.p.A.; Jay Henderson, general manager and COO, Duferdofin – Nucor S.r.l.; Glenn Pushis, senior vice president, Long Products Steel Group, Steel Dynamics Inc.; and Ashburn.



Pierluigi Molajoni, steel economist, provides perspectives on Europe and China during his keynote speech on the steel intensity of GDP.



Gerhard Buenemann (far left), vice president of mills and capital investments, Commercial Metals International GmbH, opens the discussion during the long products experts panel. Other panelists include (left to right) Michael Eldredge, vice president, long rolling, Primetals Technologies USA LLC; Olivier Lebrun, quality manager, product development, ABS Acciaierie Bertoli Safau; Fabrizio Mulinaris, executive vice president, Long Products, Danieli & C. Officine Meccaniche S.p.A.; and Ulrich Svejksky, executive vice president sales, long products, SMS group GmbH.

And promote its efforts to preserve the environment

Steel may be undervalued, but it is overly criticized as a contributor to climate change.

Ulrich Svejksky, vice president of sales in SMS group's long products plants division, pointed out that a typical rolling mill emits about the same amount of carbon dioxide as a large cruise ship. It's not much to begin with, he said, and cruise ships are never brought up in climate change discussions.

"Is somebody talking about reducing the number of ships or giving a quota to the ships? No. But (steel producers) have to apply for environmental licenses."

Gerhard Buenemann, vice president of mills and capital investment for long products maker Commercial Metals International, said the misconceptions about the industry, relative to others, are widespread.

To show people otherwise, he said, he'll walk them through a short exercise comparing the industry to the bottled water industry.

With a bottle of water in one hand and a piece of rebar in the other, he'll ask people which of two has the greater ecological footprint. Invariably, the steel, they say.

But as he pointed out, that single bottle contributes 300 kg of carbon dioxide, and that's

assuming a very local distribution. Meanwhile, he says, an entire ton of rebar from an EAF is responsible for 650 kg of carbon dioxide.

"I think we have a (marketing) problem to fix, and we better start soon," he said.

Imagine fully the potential of a digital future

The world is undergoing rapid technological change, and the steel industry needs to be sure it is fostering a mindset that embraces change, and capitalizes on it.

"The preparation of all of our folks to deal well with this fast-paced moment of change is probably more critical than actually adopting some of the technologies that are going to be coming on board," Longhi said.

Benedetti agreed, adding that steelmakers need to pick up the pace in transforming cultures.

"Maybe we have been a little too slow to train ourselves and our people to follow this trend."

And De Maré said it's not enough to simply accept technological change; steelmakers need to seize upon it. But that might be easier said than done. He said he expects that there will be resistance of the "been there, done that" sort. After all, he said, the industry has indeed deployed, effectively, automation and data analysis.

But what's different now is the scale. It's possible to collect trillions of bytes of data in real time on a global scope, he said.

Google searches are a case in point, he said. All past Google searches are indexed, and using that data, algorithms can predict what the searcher is most likely looking and present several answers, all within fractions of a second.

"The same approach is now possible in real-time process control to anticipate all possible events from all the learnings from all the blast furnaces in all the world," he said. "We have to have imagination on what (digitalization) can change in our process."

Recruitment is an immediate priority

One way to change the collective mindset is to hire those who are already thinking in new ways. But that may prove to be difficult, given the dearth of young talent entering the steel industry. Therefore, the industry needs to double down on recruiting efforts.

Jay Henderson, general manager of Nucor's Italian joint venture, Nucor Duferdofin, said the emptiness in the bucket of young talent coming into the industry is incredibly worrisome. It's critical then that the industry demonstrate to the next generation that it is a dynamic, technologically advanced industry, one in which opportunity abounds — and that message needs to be widely shared.

"I don't think we can limit it to just to engineers," he said, explaining that involving young, motivated individuals in any aspect of the steel industry will bring fresh eyes and new ways of thinking. And that, he said, will ultimately drive innovation.

Work smarter

When it comes to optimizing plant operations, adding new technology isn't always the first and best solution.

Really, the first step ought to be to examine operating practices and measure performance against the industry, said Henk Reimick, director of industry excellence for the World Steel Association.

"Use what you have, check what you've got," advised Reimick, who oversees the association's industry benchmarking program.

The program has developed benchmarking models for a variety of performance metrics — plant reliability, energy consumption, process yield and carbon dioxide intensity. Through that work, Reimick said the association has come to find that raw materials input and management decisions will affect performance just as much, if not more, than the equipment any given plant is running.

"Believe it or not, technologies are not necessarily your first port of call. It's your





Henk Reimink, *director — industry excellence, World Steel Association*, educates the audience on the association's benchmarking program.



2016 European Steel Forum attendees were given a plant tour of Ferriere Nord SpA.

management decisions — how you buy and how you operate your unit have the most significant impact on the operation,” he said.

He said the association, in the course of establishing the benchmarks, found real-world examples of this. In some cases, he said, procurement managers were buying the lowest-cost iron ore to keep costs down. But, he said, they didn't realize that their plants would have to increase their coal burn to ensure that the ore was properly reduced.

“In effect, they were actually spending more money than they needed to. If they would have bought some beneficiated iron ore, they would have been able to reduce their costs in coal, and consequently reduced their overall costs of raw materials.” ♦

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Danieli and AIST event organizers exchange a gift and gratitude for the production of a successful meeting (left to right): Fabrizio Mulinaris, *Danieli & C. Officine Meccaniche S.p.A.*; Paolo Losso, *Danieli Corp.*; Marco Di Giacomo, *Danieli & C. Officine Meccaniche S.p.A.*; Ron Ashburn, *AIST*; Paola Perabò, *Danieli & C. Officine Meccaniche S.p.A.*; Stacy Varnecky, *AIST*; Brian Bliss, *AIST*; Jon Roman, *AIST*; and Floreani Marco, *Danieli & C. Officine Meccaniche S.p.A.*