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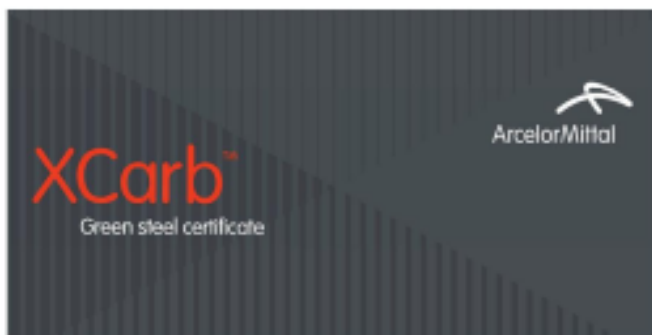
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Wire sustainability: see this as an opportunity, not a burden

Dominick Endler, who retired from Bekaert after nearly 18 years, most recently as global vice president customer & commercial excellence, guides mid-size B2B wire and cable manufacturers on capitalizing significant opportunities in the marketplace. Below he shares his thoughts on sustainability. His firm can be contacted at tel. 770-364-2149, dominik.endler@endlerpartners.com.

The wire industry is at a pivotal moment where sustainability is no longer just a buzzword but a key driver of business and competitive advantage. Below are areas which need to be considered as they can create value for your customers and organization, illustrated with some industry examples.

Market differentiation. Offering eco-friendly wire products and solutions can open new business opportunities with sustainability-focused customers. A good example is ArcelorMittal's introduction of XCarb, a program designed to reduce carbon emissions by scrap-based steel, recycling and circular economy and new technology to accelerate the steel industry's transition to carbon neutral steelmaking. The company offers a choice: a customer can split their product assortments, opting for a "standard line" at a lower price level to compete in the commodity market or a premium "sustainability line" for a customer that can get a higher price from customers that value sustainability.



XCarb from the ArcelorMittal allows customers a choice.

New products, services and efficiencies. Working to co-create sustainability offerings fosters the relation and builds long-term opportunities. There are many such supplier stories in the metals and recycling industries. Extending services to customers is also of value, such as the EcoCalculator from Nexans. This user-friendly tool helps customers choose environmentally friendly cables by assessing carbon footprint and energy consumption.

Efficiency. Sustainable practices can lead to improved operational efficiency, reduced waste and lower energy consumption.

Enhanced reputation and brand loyalty. Customers increasingly want environmentally responsible suppliers. Germany's Niehoff Group, a leading OEM of wire production equipment, became a prominent alliance member of BLUECOMPETENCE, a national organization that

promotes sustainable solutions for the mechanical engineering industry of Germany.

Long-term resilience. Sustainable practices future-proof wire businesses from resource scarcity, energy price volatility and changing market demands. Johnson Controls, which runs one of the world's largest closed-loop recycling systems for lead-acid batteries, has a program that ensures approximately 99% of the materials in its batteries are recycled and reused. The lead is reclaimed and used to manufacture new batteries.

There are many such supplier stories in the metals and recycling industries. One of note in the wire industry is the EcoCalculator from Nexans, a user-friendly tool that helps customers choose environmentally friendly cables by assessing carbon footprint and energy consumption.

Regulatory compliance and risk mitigation. Adopting sustainable practices helps wire makers stay ahead of evolving regulations. Gränges, a Swedish aluminum group, has rigorous sustainability risk screening for new suppliers. Not being able to meet such a threshold can result in a business losing the opportunity to compete.

Attract top talent. Emphasize sustainability commitments to appeal to young professionals. For much of Generation Z, this can be a precondition to joining a company.



Endler

The global picture

Per multiple reports, the global wire industry is estimated to contribute some 2-3% of global CO2 emissions. European wire manufacturers have taken a proactive stance on sustainability, as could be seen by the many eco-friendly solutions showcased at the recent wire Düsseldorf event.

The U.S. wire industry has a distinct sustainability advantage due to its widespread use of Electric Arc Furnace (EAF) technology for steel production. Per one report, in 2023 some 70% of U.S. came from EAF production, compared to about 45% for Europe, and far less for China (about 10%). EAFs primarily use scrap metal as input, resulting in significantly lower carbon emissions compared to traditional blast furnaces that rely on iron ore. This positions U.S. wire manufacturers favorably against imports from countries still heavily dependent on more carbon-intensive production methods. Per the World Steel Association (WSA), the emissions intensity of the primary BF-BOF route of steelmaking globally is 2.33 tCO2/tcs (metric tons of crude steel), while scrap-based EAF steel production has a far lower intensity of 0.68 tCO2/tcs.

A look at a key sector

The automotive industry makes a prime example of pressure for green solutions coming from the top of the value chain and cascading down to the suppliers and sub-suppliers. We see that automotive OEMs are making strong commitments to sustainability, and that in turn, requires their suppliers to follow suit.

A major automotive OEM might commit to reducing its carbon footprint by a certain percentage within a decade. This goal cascades down to tire producers, who must comply by sourcing more sustainable materials, so producers of steel tire cords must also be compliant, often by using scrap-based steel or finding other innovative solutions. Such demands have long led to advances.

One such past innovation is the development of cobalt-coated steel cords by Bekaert with its introduction of Ternary Alloy Wire (TAWI). The patent-pending coating on tire cord is comprised of copper, zinc and cobalt. TAWI uses cobalt just where it is needed—at the interface between steel cord and rubber—eliminating the need for cobalt in the bulk rubber where it had traditionally been placed. Also, to avoid cobalt containing rinsing waters ending up in the wastewa-

ter plant or in the environment, the company developed a continuous plating process with zero liquid discharge.

Per Bekaert, its research allowed the company to reduce the amount of cobalt (a heavy metal) in tires by 80 to 90%. That reduction improves fuel consumption, carbon emission levels and local air quality. Also, the cobalt-free rubber compounds are more durable, exhibit less hysteresis and provide significantly better adhesion in hot and humid conditions. TAWI makes it possible to make tires (passenger and truck) with less rolling resistance that are more eco-friendly. It is also a perfect example for the wire and cable industry of what can be achieved when sustainability partners with technical advances. ■



Bekaert's Ternary Alloy Wire is an example of a new product that was created by seeking smarter, more sustainable solutions.

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