



FAST-TRACKING INNOVATIVE SOLUTIONS TO MEET METALS AND STEEL INDUSTRY CHALLENGES

The metals industry plays a fundamental role in the growth and development of major industries and the greater global economy. Accounting for more than 90% of metals production, steel and aluminum are the backbone of industrial value creation. In the United States, 44% of steel production goes into construction, 28% into automotive and 9% into machinery and equipment, according to the [American Iron and Steel Institute](#).

While many of the industry sectors that consume metals and steel were hit hard by the global pandemic, demand has made a strong resurgence, leaving many steelmakers straining to ramp back up to full production capacity.

In order to have a better understanding of the current climate and gain valuable insights, Hyster has interviewed key customers and conducted industry research. These are our findings.



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// OUR INDUSTRY RESEARCH AND INSIGHTS

In our research, several big challenges and hurdles across the industry emerged, some new and some that continue to plague operations, including:



GROWING COMPETITION AND COSTS

The success of metals production depends on multiple industries that have faced complex challenges and unpredictable demand in recent years. Take for example the price of commodities, including iron ore, one of the essential raw materials for steelmakers. Prices have been surging for more than a year and continue to spike even higher, reaching record levels. To remain viable amid rising raw material costs in this competitive global market, steelmakers face intense pressure to minimize total costs of operation by finding savings elsewhere.



ENVIRONMENTAL REGULATIONS AND SUSTAINABILITY TARGETS

Globally, the steel industry is striving to reduce emissions by at least 50% by 2050 and pushing towards an even more aggressive goal thereafter, moving towards net-zero emissions by 2070. This is a very ambitious timeline with massive technical demands, especially with the global demand for steel projected to increase by more than a third through 2050. The capital and operating costs to achieve a carbon-lean future are extremely high, in the multi-billion-dollar range, and the change relies heavily on the right conditions being in place. The industry must optimize operations and innovate solutions to navigate the path towards a more sustainable future.



OPERATIONAL SAFETY AND COLLISION AVOIDANCE

In 2019, the U.S. manufacturing industry reported more than 116,000 nonfatal injuries. Those injuries represent a significant burden on operational productivity and budgets, as the National Safety Council estimated a cost of \$1,100 per preventable injury. Studies indicate that poor visibility and lack of awareness of hazards in the workplace are among the most common causes of accidents in industrial plants. Other causes include loss of focus due to fatigue and inexperienced or untrained equipment operators. Accidents and injuries can slow down an operation's workflow, cause possible health and safety issues and drive up insurance costs.



LOAD VARIATION AND NEED FOR SPECIAL ATTACHMENTS

Metal products vary significantly in size, shape, weight and nature. For example, to reduce steel coil change-out time, some steel customers are asking producers to provide coils much larger than standard. Mishandling metal products can damage trucks and products, slow down operations, and make it difficult to meet demand. Each product requires specific means of handling to avoid possible damages, keep operations moving, and secure a smooth flow of materials for the industry supply chain.



// SOLUTIONS

Improve your competitive position in the market by reducing costs and optimizing operations.

- Invest in lift trucks and solutions that help optimize your business while reducing the total cost of operation.
- Complete lift truck maintenance programs to achieve maximum uptime and efficiency.
- Evaluate existing equipment and monitor truck usage, service history and reporting on key performance indicators.
- Look into flexible fleet options and scale to handle fluctuations in demand.

To satisfy environmental regulations and hit sustainability targets, it's critical that the industry reduces CO2 emissions.

- When investing in or leasing equipment, consider electric powered trucks that lower emissions and improve air quality without sacrificing power.
- Understand your clean power options —whether lithium-ion batteries or hydrogen fuel cells.

Studies indicate that the most common causes of accidents at industrial plants are poor visibility, lack of awareness of potential hazards, fatigue due to long hours, and inexperience.

- Invest in equipment with ergonomically designed cabins that provide maximum levels of comfort and all-around visibility, so that operators can stay alert and have clear views of their load and surroundings.
- Evaluate whether special features like pedestrian awareness lights, object detection systems and camera-based object detectors would be helpful in your specific applications and supportive of your policies and procedures.
- Equip lift trucks with telematics to ensure only licensed and authorized operators can start and use the equipment. Utilize impact monitoring, alerts and incident data to reinforce desired behavior and optimize routes.

Metal products with awkward shapes, heavy weights or large dimensions require specific handling solutions to avoid damage and keep operations moving smoothly.

- Invest in equipment that is compatible with a variety of front-end attachments like special forks, coil rams, c-hooks, and more sophisticated magnets and hydraulic clamps.





// THE FUTURE OF METALS

Although signs of robust growth may be on the horizon now, many industries are looking to the future with uncertainty. Optimizing your fleet and operations while lowering costs is a sound strategy to improve your competitive position in the market and build resiliency within your business.

