



Demag's overhead handling system

Excelsior Steel achieved higher productivity with Demag's innovative overhead handling system

Customer Business Challenge

Excelsior Steel is a processing facility that focuses on various metals including stainless steel, copper and aluminum, for customers in many industries such as Medical, Transportation, Architectural and Electronics. Excelsior Steel was established in 1967 and has locations in the US and Canada.

Faced with increasingly demanding customer requirements and competitive pressures, Excelsior Steel's President, Tom Coward, recognized the facility needed to improve operations quickly. After evaluating various improvement options, implementing a more efficient and effective material handling solution was the path chosen. Excelsior Steel had been using a manual overhead handling crane system to move metal coils that weigh between 15,000 and 20,000 pounds. Manually identifying and managing the metal coils took a significant amount of time. Plus, if the needed inventory was on the bottom of a stack of coils, one had to move inventory to access it, further draining resources.

Tom Coward, President of Excelsior Steel

"The new system has enabled Excelsior to run faster and more efficiently. Metal coils are still stored three levels high, but now Excelsior knows where inventory is at all times, and customers can access the system online to track their product from arrival through processing."

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Demag Solution

Excelsior selected Demag Cranes & Components to create a more efficient solution to identifying and managing the metal coils. Demag performed an evaluation and engineered an automated handling system solution. The integrated coil storage solution included a top-running double girder crane that can handle 40 metric tons and is equipped with on-board controls for automatic operation and inventory tracking as well as storage strategies.

The first step in the system's inventory management process is assigning a unique identity to metal coils once they arrive from the customer's mills source. Then, using data points like outside diameter, width, weight, thickness, grade, an Excelsior unique identification number and customer name, the system creates a profile to determine the ideal storage location. The key to this system is that it's designed to remember each storage location for quick retrieval. The system moves along the grid and lowers the open coil grab arms to the precise height. When the arm's photo eye beam connects with the receiver on the other arm, it's safe to close the arms and lift the coil. If only a portion of the metal on a coil is processed, the system records new data points to determine a new ideal storage location.

Excellent Results

"The new system has enabled Excelsior to run faster and more efficiently. Metal coils are still stored three levels high, but now Excelsior knows where inventory is at all times, and customers can access the system online to track their product from arrival through processing", says Tom Coward. Demag's overhead handling system drives better customer service, better inventory management, and enables Excelsior manpower to focus on higher value-added tasks while the crane does the heavy lifting.