

Fully Automated Industrial Pick-and-Place Control System *cont*

Thinking Outside the Storage Box

JNE Automation's Coil Storage Management System was installed on a 45-ton coil handling facility. Key deliverables included: floor space utilization through automated, two-level stacking, dynamic map storage and bay layout optimization.

Coils arrive at the facility by truck and are manually unloaded onto one of several transfer cars. Each coil has a unique identifier denoting its respective data. The ID is scanned using a wireless, hand-held scanner, which inputs the data into the Inventory Management System. From this point on, the coil is received into the storage facility fully through the automated storage control system.

The transfer cars are automatically driven into the warehouse where one of the overhead cranes picks up the coil and places it into a pre-designated location. The storage bays are optimized into zones based upon the manifest data, coil type and dimensions. JNE's Map Management Tool dynamically re-zones the storage space depending upon current stored coils plus manifest data to accommodate the client's needs.

The facility requires one person to maintain daily operations. When a coil is requested for shipping from the facility, the control system searches for the coil and determines what actions are required to move it to the Shipping Bay. If the coil is stored on the lower level of a multi-level facility, the system prescribes the minimum sequence of coil moved to achieve the result, again updating the database with new coil locations and coils removed from the facility. The control system maintains daily logs of all coil movements, as well as any equipment diagnostic feedback.

JNE's cutting edge control system is intelligent, negates damage caused by human handling error and improves the overall efficiency of coil storage while minimizing operational costs.



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Thinking Outside the Storage Box

COIL STORAGE MANAGEMENT SYSTEM

- Allows you to plan, organize, store and retrieve, and document inventory through robust, reliable, automation and informative, user-friendly screens.
- Maps, stores and retrieves coils for multi-customer, multi-type, multi-bay and multi-level storage facilities. This is believed to be the only known system in North America that deals with stacked storage of steel coils.
- Has a placement accuracy that is better than 99.9%.
- Provides easy-to-use input and status screens, with dynamic feedback of the transfer car and storage crane movements, as well as buffered data storage of product information and storage location.
- Includes dynamic coil tracking, coil storage optimization, allocation of transfer car and crane movement for maximum efficiency, real-time inventory database and display, control system and related equipment diagnostic monitoring

