Coil storage data integrated into the warehouse management system

3tn has integrated the mechanical data of Lankhorst KLP® coil storage systems into its TWMS/metals warehouse management system. It eliminates the risk of entering wrong data when configuring a management system for a coil store. First experience at Austrian steel company voestalpine has shown that the data integration also saves time.

Optimization of coil logistics and storage is one general approach of the warehouse management system TWMS/metals from 3tn. For each load case and storage place, the software calculates the loads acting on the coil stops and the resulting force vectors. The configuration of a warehouse management system used to entail the manual entry of a great number of values, among others minimum and maximum coil diameters, maximum load and the resulting force vectors for the coil cradles, wedges, stops, etc in use. That is a challenging task, because any incorrect data input may be a potential safety hazard.

3tn has now integrated the mechanical data of the commonly used KLP® coil storage systems from Lankhorst Mouldings into its TWMS/metals warehouse management system.

When configuring a coil store, the data of Lankhorst's KLP® coil storage systems, KLP® RollStop systems or KLP® Rollblocks can now be simply clicked on with the mouse. Re-entering of data is not necessary.

By integrating these values from the coil storage system, 3tn enhances safety in various respects: First of all, the users can be sure that the data of each component has been correctly assigned. Only data of those KLP® systems actually in use in the mill are stored in the system. Pre-configuring the system in this way largely reduces the risk of mistaking components that look very much alike but have different properties, for example, in terms of maximum allowable load or coil temperature.

Later on, when the storage rows are being arranged, the system will send out a warning in case the elements are not properly configured; for example, in case a coil stop designed for coil diameters of up to 1,800 mm is intended to accommodate coil diameters of up 2,000 mm.

The integrated data also make work easier for the users: They simply choose the required items from a list and configure the warehouse with a few clicks on the mouse. Nevertheless, they still have the flexibility to define specific rules for each individual storage place. It is possible, for example, to specify for a certain area that the coils may not be stacked, for example, in an area where blocked coils are stored.

Safe and correct coil storage relies on a multitude of parameters for both, the coils and the storage place (© Picture: Lankhorst Mouldings)

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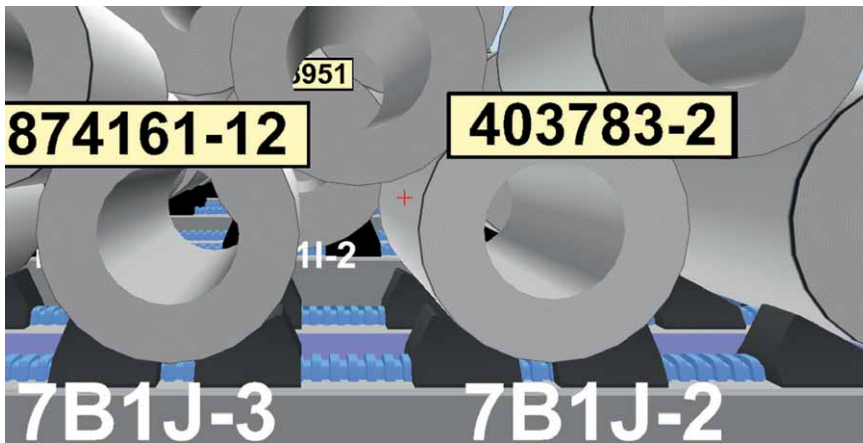
For each load case and storage place, TWMS/metals calculates the load acting on the coil stops and the resulting force vectors (© Picture: 3tn)

Bas Brouwer, manager of the "Steel Industry" business unit at Lankhorst Mouldings, sees many synergies between warehouse management and coil storage: "Our products and the warehouse management systems from 3tn are in use in numerous mills around the globe. Therefore it was only logical to combine the two systems. We jointly offer our customers a maximum of safety."

Also for Thorsten Tönjes, one of the two managing directors of 3tn, safety in the coil store is a key issue: "We calculate for each coil the loads acting on the coil stops, and Lankhorst has the expertise to guarantee that the stops will safely accommodate these loads. 3tn software and Lankhorst hardware have been combined within one unique solution. This will take the already high safety of our systems to the next level."

At its Linz (Austria) steelworks, voestalpine Stahl GmbH operates numerous KLP® storage systems from Lankhorst Mouldings. 3tn is currently implementing TWMS/metals in 28 warehouses of the mill, for the first time integrating KLP® data. This provides voestalpine Stahl GmbH a central management tool capable of pre-setting the parameters for the 3tn warehouse management system in the various warehousing areas and ensuring that only those coil stop types physically available in the mill can be clicked on. This enhances safety, makes for more ease of operation and practically rules out the risk of errors. ∎
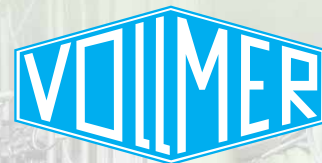
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