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For immediate release

Westfalia implements Automated Storage and Retrieval System (AS/RS) for Reissdorf Brewery

Enhances storage capacity by 33% in existing facility without shutting down the system

York, Pa - June 4, 2009 – To have longevity one must continue to grow and adapt to the times. For over 100 years, Heinrich Reissdorf brewery has been doing just that by introducing new products, following its core principles and investing in new technology innovations. In 2003, Westfalia installed a 3,400 pallet position automated storage and retrieval system (AS/RS) and conveyor system. Recently, Westfalia enhanced the AS/RS to store an additional 33% more pallets, up to 5,000 pallet places, in the same building, and without a disruption to the warehousing system.

Brewery Reissdorf: 110 years of Kölsch tradition

In 1894 Heinrich Reissdorf established the Reissdorf brewery, and a couple of years later the famous Kölsch beer brand was established as a top-fermented beer from Cologne. After WWII, the Reissdorf brothers rebuilt the company which had been nearly completely destroyed in the war. Nowadays Michael von Rieff manages the private family-owned company in fourth generation as managing partner. Next to classic Kölsch in bottles, cans and barrels, Reissdorf also sells the spirit, Kölsch-Bierbrand.

This private brewery's success over the past 110 years can be attributed to a sense for the essential. Reissdorf intentionally does without TV and radio advertising. Their investments in efficient and practical logistical systems give them a competitive edge, and helped support the warehouse expansion without interruption of service.

Relocation to industrial zone and construction of the high-bay warehouse

After a decade of continuous expansion, Reissdorf brewery relocated from the headquarters in Severin's Quarter to the industrial zone of Cologne-Rodenkirchen in 1998. On the new compound Reissdorf built a brewery equipped with the most state-of the-art technology. The new infrastructure helped Reissdorf to sell more than 17,171,183 gallons (650,000 hectoliters) of Kölsch as market leader in the past year.

Image 1: Private brewery Reissdorf is re-located in Rodenkirchen in 1998. In 2008, Westfalia enlarged the capacities of the distribution warehouse for Kölsch in bottles and barrels more than 30%.

Automated Storage & Retrieval System (AS/RS) warehouse with dual pallet transport

In 2003, Westfalia designed, built, and installed an Automated Storage & Retrieval System (AS/RS) in Reissdorf's new ambient temperature warehouse. Using the Satellite® rack entry vehicle to store pallets up to 8 deep in a lane, the warehouse was able to store 3,400 pallet positions. In 2008, while it continued operations, Westfalia engineers extended this high density automated warehouse by 1,600 pallet places and added two disposal stations, in just a couple weeks. The warehouse now stores 5,000 pallet positions and serves as a distribution buffer for Kölsch 0.33 and 0.5 liters bottles (12 – 17 oz.) and barrels stored on Euro pallets. Its compact construction integrates with the production in a space-saving way. The high-bay warehouse has two blocks, is more than 82' (25 m) high, approximately 65' (20 m) wide and 164' (50 m) long since the extension. Two storage and retrieval machines (S/RMs) pass through one aisle.

"The cranes even run two pallets at the same time. The combination of a multiple deep storage lanes with one crane aisle and dual transport enables a high throughput on minimum space. Without 8 pallet deep lanes, say only double deep pallet lanes, additional cranes would need more aisles and more space, resulting in higher building and operation costs", explains Frank Wüstenfeld, Project Manager with Westfalia. "With the high density automated warehouse we serve peaks caused by carnival or soccer events in the most effective way."

"Westfalia extended our installation in the past year without shutting down the existing system," states Werner Kraus, Technical Director of private brewery Reissdorf.

Image 2: The high-bay warehouse serves as distribution buffer and offers now more than 5,000 pallet places.

Expansion of a system in operation

Frank Wüstenfeld, Westfalia'a Area Sales Manager and beverage industry specialist explains, "Our engineers took off the casing of the high-bay warehouse silo while in operation, performed the expansion and put on the casing again. All of that happened in less than two months."
With the recent upgrades, Westfalia also added the feeding lanes that were integrated into the high-bay warehouse. Two transfer cars transverse these lanes dynamically. According to the load of the trucks, they distribute the goods to the corresponding conveyors, where they are picked up by fork lift truck drivers. Appropriate pallet information, gathered and managed by Westfalia's Warehouse Control Software (WCS), indicates the relevant fork lift truck terminal.

Transfer car with inductive power supply

Two in-feed conveyor lanes and a long accumulation conveyor loop installed at the front of the high-bay warehouse form the interface between production and warehouse. The material flow out of production happens automatically via two in-feed conveyor lanes, and a special rail and floor-free transfer cars with inductive power supply. The transfer car runs through the hall between distribution and production parallel to the high-bay warehouse at its front. Its driving route separates the two areas. Thanks to the floor-free solution, fork lift trucks or hand lift trucks can rapidly cross the transfer car's route at two points. "The transfer car is supplied without any cables. Instead we have a current rail integrated directly into the hall's floor. This creates flexibility regarding space, " says Frank Wüstenfeld with Westfalia.

Image 4/5: Transfer car with inductive power supply at the disposal station of the conveyors in the production areas bottling and barreling.

Buffering and storage via conveyor loop

The transfer car moves palletized goods toward the accumulation conveyor loop in front of the high-bay warehouse, where goods are buffered for storage. It consists of a long conveyor that runs in circles on different levels. The conveyor loop automatically brings the goods to the two entrances of

the high-bay warehouse where one of the two SRMs takes over. Additionally the buffer has so called “decision points” with special barcode scanners provided by Leuze electronic.

“At Reissdorf we have implemented four model BCL 500i barcode scanners on top of each other. These innovative barcode scanners are equipped with movable mirrors that can read bar codes at places that are inaccessible for other barcode readers with the help of their huge reading area. The reader’s system results in a fast, safe and automatic decoding of bar codes containing information, for example best-before dates. It can also tell the position where the bar code can be found on the object. The reading system supports Westfalia’s logistics software in calculating the storage strategy and reduces errors when importing the bar codes", states Jörg Wachlinger, Project Manager with Leuze electronic.

Image 5/6: Rack aisle for two SRMs at Reissdorf. The SRMs can handle two pallets at the same time. This results in a high throughput.

Image 7: Conveyor lane

Fork lift trucks with triple-pallet load handling

When releasing pallets from storage to distribution, the S/RMs transfer pallets onto truck feeding lanes which can hold up to 150 pallets (five complete truck loads). Westfalia has more than 30 chain conveyors in the lower level of the high bay warehouse for these order accumulation feed lanes. Controlled and managed by Westfalia’s logistics software, the SRMs load the accumulation lanes respecting both best before dates and truck sequencing.

Westfalia transfer cars transport the loaded pallets from the accumulation lanes to six disposal stations. Disposal stations consist of a loading nozzle with conveyors, a turn table and a delivery zone for three pallets. Thus, fork lift trucks can load six trucks at the same time. Westfalia added two disposal stations with the expansion.

Reissdorf’s fork lift trucks have a special three-pronged fork. They can move three loaded pallets at the same time from the disposal stations to the designated truck. By doing this, several trucks can

be fully loaded up to 30 pallets each, with just 10 fork lift truck rides each. This enables rapid throughput especially for peak times. “Usually we assign two disposal stations to one truck tour. With six disposal stations we load up to 3 truck tours at the same time via fork lift truck with triple fork,“ explains Werner Kraus.

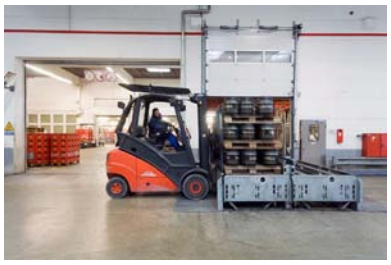

Image 8: Fork lift truck with triple fork

Logistics software controlling all the material flows and return of empties

Westfalia’s logistics software controls the AS/RS and integrates with Reissdorf’s ERP system for efficient data exchange. The warehouse control software operates the system based on First-In First-Out (FIFO) inventory management, and maximizes the AS/RS efficiency to complete storage/retrieval missions in respect to the integrated order accumulation lanes. In addition, it manages a manually operated block warehouse and links it to the entire logistics process. Terminals mounted on fork lift trucks provide an effective interface between manual handling and automated warehouse. Reissdorf’s logistics managers administer the whole facility via an i-point office.

The logistics system also executes the return of empty bottles and barrels. Trucks transport the empties to the loading hall. Here fork lift trucks transport the bottles and barrels to a washer for empties located in the production area. The fork lift trucks cross the floor-free route of the transfer car with inductive power supply between high-bay warehouse and production. They then take the washed empties to a conveyor. Conveyors transport the empties to the bottling area where the logistics cycle begins again, in a closed loop process.

About Westfalia Technologies, Inc. (www.WestfaliaUSA.com)

Westfalia Technologies, Inc. is a leader in providing logistics software and material handling equipment for plants, warehouses and distribution centers. Their expertise in combining software (WMS) development with automated equipment manufacturing reveals Westfalia’s ability to deliver turn-key solutions to meet each client’s specific needs with unsurpassed quality and control. To learn more about Westfalia’s products, including Case Packing and Case Handling Systems, Automated Storage and Retrieval Systems (AS/RS) and *Savanna.*NET® Warehouse Management Software, visit www.WestfaliaUSA.com.