



“We chose to cooperate with Kalmar because of its combined knowledge as a crane supplier and system integrator.”

JENS HANSEN
MANAGING DIRECTOR
CONTAINER TERMINAL BURCHARDKAI (CTB)

New lease of life for HHLA Burchardkai

The oldest and largest container terminal in Hamburg stays in the lead by doubling capacity while keeping the same footprint.

Terminal

HHLA Container Terminal Burchardkai (CTB) is the largest and oldest facility for container handling in the Port of Hamburg. Established in 1968, the terminal now handles one in three of all containers coming through the port.

There is a long tradition of innovation at Burchardkai: the terminal was the first to introduce the straddle carrier concept. As an innovator the terminal ensured a new lease of life, facing the challenges of the shipping industry.

Challenge

In order to maintain its leading position, CTB was faced with the challenge of increasing capacity from 2.6m TEU to more than 5.2m TEU. With the terminal footprint restricted, the growth could only be realised by increasing stacking density. A shift away from the straddle carrier operations was imminent.

From 2002 to 2004 various studies were completed on the new operating concept. The new concept was to be introduced step-by-step to ensure the terminal remained operational during the conversion. For this specific reason CTB placed great emphasis on its supplier being able to provide an integrated solution.

Solution

In 2004 CTB's supervisory board approved the new operating concept: automatic stacking cranes (ASCs).

The ASCs create a higher stacking density: each of the 8 blocks is 10 containers wide, 5 high and 44 TEU (330 meters) long. The terminal is unique in the world, featuring three cranes per block: the waterside and landside are each served by a small crane, with a third crane capable of passing over the smaller cranes while carrying a container.

The manual straddle carriers were maintained to feed the ASCs.



Technology

The application at HHLA Container Terminal Burchardkai is unique in featuring 3 cranes. The solution was favored by HHLA to allow the capacity and throughput of the ASC blocks to be optimised within the given space restrictions.

Where the inner, smaller cranes share the same rail, there is a separate rail for the outer, larger crane. This allows the outer crane to move over the smaller cranes, while carrying a container, increasing the handling capacity at either the waterside or landside. At the landside the ASCs handle road trucks with operations conducted by a remote control system by control room staff.

Kalmar TLS manages and controls the operations, efficiently handling the exceptions typical in stacking operations. Acting as an intelligent interface to the Terminal Operating System, TLS ensures the full potential of the three-crane concept is realised.

Added value

The ASCs ensure constant high throughput as well as predictable and reliable performance around the clock. The main value to CTB is the high stacking density provided by ASCs, allowing capacity to be increased regardless the lack of additional space. Without the ability to expand, the inability to increase the terminal's capacity would have directly resulted in HHLA not being able to maintain its leading position amongst European ports.

The three-crane concept ensures handling capacity on either the waterside or landside is significantly higher. In combination with Kalmar TLS the operations are optimised, ensuring shipping lines and trucking companies are provided with the best service level possible - making CTB an attractive terminal to conduct business with.

Results

In 2013 the Port of Hamburg achieved a growth of 6.2 percent, with the container handling the principal source of growth. More significantly the Port of Hamburg succeeded in growing and gaining market share against the trend in its competing ports. Ultimately Hamburg consolidated its position as Europe's second strongest container port.

"The Port of Hamburg's throughput trend is a fine signal for Hamburg and the entire Metropolitan Region. Growth of 6.2 percent is a most impressive result, underlining the tremendous effectiveness of port and logistics companies in Germany's largest universal port," said **Axel Mattern**, Port of Hamburg Marketing's Executive Board Member at the presentation of the Port of Hamburg's cargo handling figures for 2013.

Contact

kalmar@kalmarglobal.com

Kalmar is the industry forerunner in terminal automation and in energy efficient container handling, with one in four container movements around the globe being handled by a Kalmar solution. Kalmar is part of Cargotec.

Kalmar
Porkkalankatu 5
FI-00180 Helsinki, Finland

www.kalmarglobal.com

