

# Cargo<sup>3</sup> Containment

## Bagging Equipment & FIBCs



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### New logistics solution from SMB International

#### MASTERING THE COMPLEXITY OF BARGE LOADING SYSTEMS

**THE NORTH GERMAN MATERIAL HANDLING AND INTRALOGISTICS COMPANY HAS BUILT A TECHNICALLY ADVANCED FULL-FLEDGED SHIPLADING SYSTEM FOR BAGS IN THE PORT OF GDANSK.**

Lower operating and handling costs as well as shorter port calls allow customers to make optimum use of waterways, writes *Dipl.-Ing. Andreas Heckel, Managing Director.*

Mainly, the loading process must be performed with optimum utilization of the available cargo space. Therefore, reliable

shiplading systems pay off. In Poland's largest port and important gateway to Scandinavia, a new facility was built in 2021 to enable the handling of up to 300,000 tonnes of sugar a year.

Here Polish sugar producer *Krajowa Spółka Cukrowa S.A.*, known as *Polski Cukier* for short, supplies 40% of the sugar produced in Poland and faced the challenge of loading its commodity in 2,400 bags per hour. The vessels to be loaded have a stowage from 4,000dwt to 35,000dwt.

#### UNIQUE SOLUTIONS FOR CARGO HANDLING

German company *SMB International GmbH* is a specialist for loading systems, conveyor technology and material handling and has implemented numerous loading systems all over the world for more than 25 years.

The proven two-stage production process includes the loading systems being designed directly at the headquarters near Hamburg. This provides the basis for the customized implementation of projects and their subsequent installation on site. In

Gdansk, SMB International has implemented a mobile shiploading system. It is steel cable guided, controlled by winch drives and runs on existing rails.

The bags, which are filled automatically in the adjacent building, are transported by conveyor belts onto the roof. Via belt systems and chutes, the bags reach the top of the boom and hence the spiral chute. The spiral chute can be moved 10m on the boom by means of a lantern gear drive to accommodate all vessel widths up to 35,000dwt. The outreach may measure up to 8.5m in length and can be further increased by the telescopic conveyor belts.

Another strong point of the facility is the possibility to extend the spiral chute 2.6m in a spiral. In combination with the swivelling loading head, the continuous conveyor can thus reach all storage locations in 360° of the cargo hold. Even when the boom is raised or lowered, a hydraulic cylinder ensures that the spiral chute always remains in a vertical position so that the bags can be transported and then slide by gravity into the ship's belly at all times.

#### EXPERTS IN PROVIDING FLEXIBILITY AND SAFETY

Shiploaders are always individually designed to their future tasks and requirements.

Long-term cost-efficient operation is another obvious goal for the engineers. SMB meets the special material requirements of bulk goods transport by using high-quality components and relying on the highest quality standards already during production. This results in high-performance conveying solutions designed for smooth long-term operation using a minimum of energy.

The SMB scope of supply and installation of all components includes a control cabinet container and software for all movements, which enables automatic loading at any time of the day or night. This is supported by the manual operation of a radio remote control for each part of the structure separately. Many SMB systems handle up to 1,500 tonnes per hour, but a much higher throughput is also possible.

Developing the system for Gdansk, optimizing performance and flexibility while ensuring high safety, was of great importance for the engineers. While the flexibility of conventional shiploaders is often limited, SMB designs make it possible to integrate the loading process into the logistics concept of the port being assembled on site in close cooperation with the customer. SMB's shiploading systems have proven their performance

over decades. In February 2021, the test loading of the sugar bags in Gdansk took place successfully.

#### SMB INTERNATIONAL – THE MATERIAL HANDLING SPECIALISTS FOR INTRALOGISTICS AND SPECIAL MECHANICAL ENGINEERING

The SMB Group in Quickborn develops sophisticated system solutions for worldwide use. SMB International is a respected planner, developer and manufacturer of customized products such as filling systems, storage systems, palletizers, robotics, conveyor technology and shiploading systems.

The company deliberately relies on a high share of in-house production at its location in Quickborn near Hamburg. This allows customer requirements to be met quickly, effectively and at consistently high quality. The company's design and production facilities provide the basis for its high vertical integration, which permits the timely delivery of high-quality products. The service team works on large-scale projects both nationally and internationally. The distribution network, which has global operations, ensures swift and effective information-sharing and co-ordination.