Portaload range brings flexibility and efficiency

Buhler AG, Uzwil, Switzerland

The global grain trade continues to develop in a highly dynamic way. Up to 250 Mio. tonnes of grain are presently being transported from grain producers to grain processors and consumers around the globe. By the year 2030, this staggering figure is expected to increase to over 400 Mio. tonnes. Therefore, efficient grain handling systems are in high demand, this in conjunction with improved grain storage and management systems.

According to estimates by the Food & Agriculture Organisation 'post-harvest' losses amount to 20-30 per cent, caused by natural disasters, political factors, lack of knowledge and improper plant technology. Therefore, the general request for substantial improvements on all fronts becomes evident.

The Buhler Grain Handling business unit participates actively in this development; the focus is particularly on reliable, fast and efficient ship unloading/loading as well as the safe storage of grains, oilseeds and derivative products.

Specific requirements with regards to the protection of the environment (minimal dust emissions, reduction in power requirements, the handling of genetically modified products etc.) as well as general requests for reliable and safe food supply chains, increases the complexity of modern grain handling plants. Retraceability of the product flow – from the farmer to the consumer – plays an ever increasing role in the overall grain management.

This brief article focusses on the array of ship loading installations by Bühler AG with an example of the attention given to avoiding dust emissions during the ship loading process.

Portaload: mobile and stationary ship loaders

Buhler AG is one of the few worldwide active suppliers for bulk handling systems for a range of products such as cereal grains, oilseeds and derivatives. These activities include mechanical and pneumatic ship unloaders, bulk storage facilities of all types of design and mobile and stationary ship loading systems.

Buhler AG has specifically gained vast experience through its involvement with ship loading facilities in Argentina. Based on this, varied customer requirements for such installations can be met, be it in the selection of appropriate equipment types or other relevant individual parameter considerations. In today's business environment, there are many factors relevant in the selection of equipment and supplier; the main selection criteria, however, remain:

- Return on Investment
- Short vessel berthing times
- High throughput paired with high reliability of the chosen equipment
- Individual customer's preferences

Buhler AG has demonstrated the ability to ensure the fulfilment of such requirements in many projects around the world. Examples of stationary ship loading installation projects successfully implemented include:

- Cargill Agricola S.A. – Terminal in Por-de-Sol, Santarém, Brasil. Three loading towers and 1 loading line with a throughput of 1,500t/h.
- Noble Argentina S.A. – Rio Paranà, Argentina. Three loading towers, two loading lines with throughputs of 1,600t/h of soybeans each.

Stationary ship loaders have proven to be efficient and cost-effective solutions. These units allow the loading of ships holds individually or simultaneously through several loading lines. The loading boom is designed to perform lifting, lowering and slewing motions, thus eliminating time consuming shifting of the vessels. If required, the loading booms can be equipped with a kick-system, enlarging and optimising the loading process. Stationary Portaload ship loaders have executed throughputs of up to 2,000t/h per line for vessels of up to 120,000DWT. The kick-angle of +/- 45° ensures efficient loading of the individual ship holds.

Two new Buhler 'Portaload' ship loaders equipped with dust suppressors ready for operation in the Port of Dalian Beiliang /China. Throughput: 1000t/h of grain each.

Flexible and cost-effective mobile shiploader

Mobile rail mounted ship loaders are distinguished by their flexibility. The combination of movements such as the ability to travel along the ship's side, the vertical boom motions and the kick-in/kick-out technique of the loading spout allow an ideal loading of a wide variety of ship types and sizes. The unit shown above is a typical example of this type of application.

Dust suppression during loading operations

Increasingly stringent in-plant sanitation and environmental requirements in terms of dust emissions can be satisfied by the installation of a dust suppressor. It regulates the material throughput in such a manner, that the material velocity at the outlet of the loading spout is low and therefore only minimal dust emission occurs.

Summary

In short, the Grain Handling Business Unit of Buhler AG offers a wide range of equipment, support and services for the Grain Handling community; be that consulting and planning services, financing, production, installation and start-up, after-sale service, quality assurance and spare parts services.

ABOUT THE COMPANY

Buhler AG is a global Technology Group and a system partner for the supply of plant, equipment and process know-how in the fields of Food Processing, Chemical Engineering and Die Casting, with 6,600 employees worldwide.

ENQUIRIES

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