BRUKS Siwertell
BULK HANDLING & WOOD PROCESSING



SIWERTELL SHIP UNLOADER - UK

SIWERTELL UNLOADERS MEET SUSTAINABLE ENERGY DEMANDS

A new terminal in the Port of Liverpool, owned by the Peel Ports' company, Ligna Biomass, handles up to three million tonnes of wood pellets a year for leading UK power station, Drax. Central to this operation are two fully-enclosed, high capacity Siwertell ship unloaders.

Challenge

Developed as a result of an agreement with leading UK power station, Drax, to handle up to three million tonnes of US-produced wood pellets a year, the Ligna Biomass terminal on Gladstone docks needed high capacity biomass handling with a proven track record of reliability, safety and environmental performance. Any system also had to meet sophisticated technological demands, such as safety systems (explosion/flame detection and propagation prevention), operational requirements (HMI system, master/slave function), thermal detection system, explosion relief system and temperature monitoring system and also be delivered within a short lead time.

The environmental gains from having an enclosed system for handling biomass present another challenge. When biomass is handled and stored, using such systems, significant risks, including fire and dust explosions also increase. Therefore any system adopted by the new terminal had to be inherently safe.

Solution

Ligna identified Siwertell screw-unloading technology as the ideal solution and, based on good experience with a 2006-delivered Siwertell unloader at its Seaforth grain terminal, Peel Ports decided to invest in two fully-enclosed, screw-type Siwertell 790-D ship unloaders. With rated capacities of 1,200t/h, they supply the power station with up to ten train loads of pellets per day, accounting for up to 40 percent of the total biomass consumed by Drax each year.

Siwertell has unrivalled experience of handling hazardous bulk cargoes, manufacturing the only mechanical, continuous totally-enclosed unloaders used for handling hazardous cargoes on a large scale. They are equipped with a safety system designed to minimise the risk of fire or explosion and to detect, contain and deal with any such incidents should they occur.

Results

FACTS

CATEGORIES:

- **Ship Unloading**

MATERIALS:

- **Biomass**

CUSTOMER:

Ligna Biomass Limited

ADDITIONAL FACTS:

Unloader model	ST-790-D, railmounted
Unloading capacity	1,200t/h
Maximum ship size	Panamax
Total weight	574t
Material handled	Biomass

PRODUCTS:

- Ship unloading

LOCATION:

Gladstone dock, Liverpool, United Kingdom

FOR MORE INFORMATION, PLEASE CONTACT US

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SCAN THE QR-CODE:
View the Case online

The Ligna Biomass terminal has been fully-operational since mid-2016. Intake has gradually increased and the machines provide a reliable, high capacity, dust-free, environmental-friendly operation. The unloaders discharge vessels up to Panamax size and a performance test was successfully completed with a good margin. The new terminal can store up to 100,000 tonnes of biomass.

Siwertell unloader capabilities are well-proven through numerous deliveries and experience-led developments. They are an excellent choice for handling biomass with respect to the environment, capacity, reliability and safety. Integrated safety systems incorporate detection measures including thermal cameras, temperature and pressure sensors and spark detectors. In the event of an explosion, fast-acting valve technology prevents it propagating upstream, while emergency discharge, directly to trucks, stops damaged cargo being transported any further.