

## Customization and Customer Service Delivering Success

Astec Bulk Handling Solutions continues to excel in providing customized bulk material handling solutions to its wide customer base. The company offers the Ship and Barge loading/unloading industry the most innovative and customized mobile bulk handling systems on the world market today. Astec Bulk Handling Solutions (ABHS) draws upon existing experience, proven engineering designs and manufacturing footprints from Astec companies around the world to deliver what our customers are asking for: A single source for customized bulk handling solutions.

### RADIAL TELESCOPIC SHIPLOADER The Key Facts:

**Country / Region:** Ireland

**Product:** Mobile Ship loader

**Application:** Shiploading directly from plant conveyor

**Material:** Sintered Magnesia



**"Nobody could match our customer-driven designs, competitive pricing and lead time, something of which we are extremely proud."**

**Astec Bulk Handling Solutions are proud to present a hugely successful ship loading case study. ABHS continue to install similar bulk material handling equipment and systems in Ports and Inland Terminals in North America.**

**This innovative custom design shiploading system for Premier Periclase, in Drogheda, Co Louth in Ireland, is an amazing example of a shiploading system now available through ABHS.**

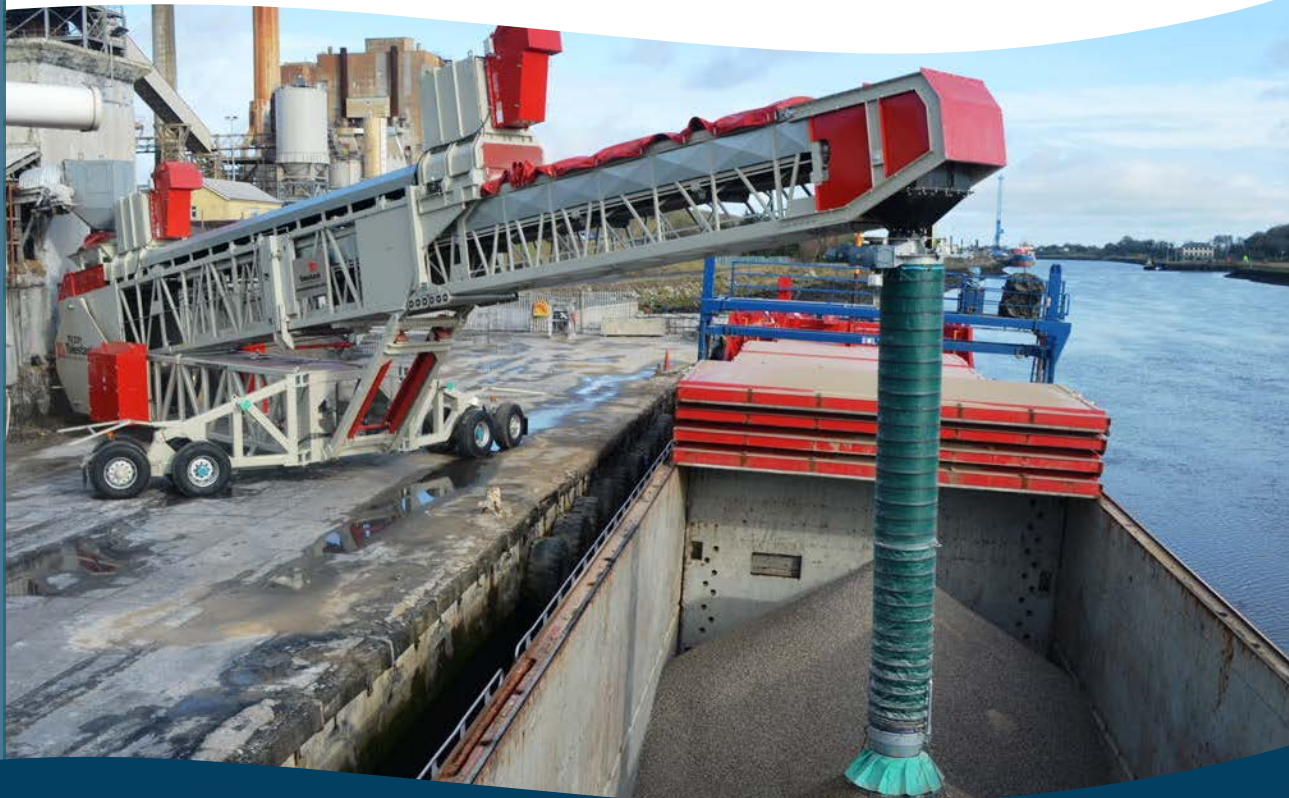
#### **BACKGROUND**

As part of the RHI Group, Premier Periclase produces sintered magnesia from seawater - RHI's basic raw material for the production of high quality refractory products. The Radial Telescopic Shiploader is being used to load coaster vessels directly from a plant conveyor. The Radial Telescopic Shiploader has been fitted with many features with a particular emphasis on controlling fugitive dust, increasing loading rates and improving working conditions - all major reasons for the investment!

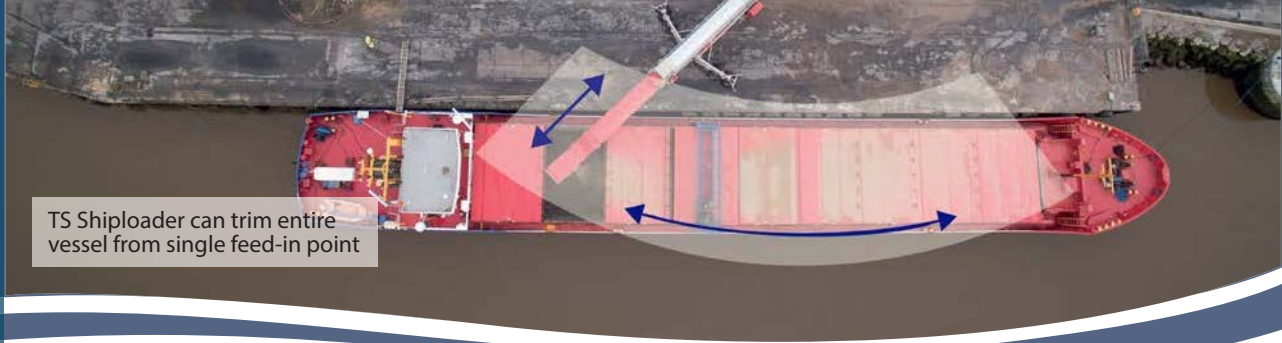
#### **APPLICATION**

Drogheda is located 45 kilometers north of Dublin, where the mouth of the River Boyne flows into the sea. What makes this location so special also lies in the sea. Founded in 1936 as a cement plant, the site in Drogheda has been producing high-quality sintered magnesia from seawater since 1980. Premier Periclase is an important global provider of seawater-based large crystal sinter magnesia. RHI uses this material to produce bricks for high-temperature kilns in the steel, nonferrous metals, and glass markets. In Drogheda, low-iron material that is very rich in magnesia is extracted from seawater in a special process and fired at 2,300° Celsius in vertical shaft kilns to produce approx. 70,000 tons of sintered magnesia a year.

# CASE STUDY







TS Shiploader can trim entire vessel from single feed-in point

## REDUCED DUST EMISSIONS

Since the ABHS installation, Premier Periclase has reported a significant reduction of fugitive dust during the shiploading process and improved loading rates. Fitted with fully galvanised dust covers on the full length of the outer conveyor, side wind plates on the inner conveyor, a retractable canvas telescopic dust cover on the inner conveyor, a fully enclosed hood at transfer point, dust extraction system on the feed-in and transfer points and an integrated compressor for dust extraction in the under-carriage, the entire shiploading process is now virtually dust free and simple to operate using the radio remote control.

Prior to the TS-331 installation, Premier Periclase were using an aging shiploading system that was difficult to manoeuvre and allowed the material to freefall into the hold of the ship. It was not possible to adjust the loader to the size or position of the ship, and it was operated at a reduced loading rate to slow the movement of material and ensure that a low dust level was

maintained. The main concern was to eliminate dust from the shiploading process and the ABHS system has proved invaluable.

## CONTINUOUS LOADING FROM ONE FEED IN POINT

As demonstrated in the picture below the TS-331 Radial Telescopic Conveyor allows the Operator to load the vessel from one fixed feed-in point. The radial telescopic features ensures that the vessel can be loaded without the need to stop and re-position the shiploading system resulting in less downtime when trimming the vessel. This translates into an increase in the production rate as well as a significant reduction in the loading time. In addition the Cleveland cascade chute with its angled cones (which slows the trajectory of material into the vessel) also allows for added dust control as well as a fully controlled manner of discharge.

# CASE STUDY



## FEATURES

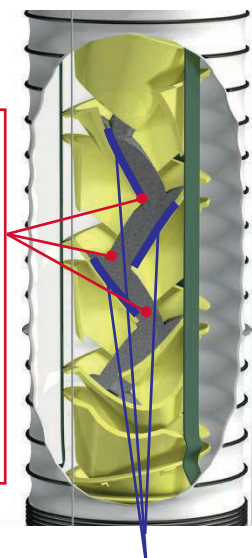
- Galvanised Dust covers full length of outer conveyor
- Canvas Retractable Telescopic Dust cover on Inner Conveyor
- Side wind plates on inner conveyor
- Fully Enclosed hood at transfer point from outer to inner
- 8.5m Telescopic Cascade chute on discharge c/w radio remote control of all features of shiploader
- Dust extraction system on feed-in and transfer points
- Integrated compressor for dust extraction integrated into undercarriage
- Radio remote control of all functions



## CASCADE TELESCOPIC CHUTE

The chute design eliminates material freefall due to the cone angles and spacing. Because material falls on to material, degradation and impact abrasion are greatly reduced.

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Low velocity of material in mass-flow reduces slide abrasion and minimizes dust emissions.

**"We are delighted with the ABHS shiploading system and it has proven invaluable in solving the dust emission problems that we were experiencing. I would recommend ABHS without hesitation."**

**Mr Carl Griffin,  
Engineering Manager,  
Premier Periclase**

## INNOVATIVE CUSTOM ENGINEERING

Astec Bulk Handling Solutions works closely with customers from the earliest stages of the sales process to ensure that the client's needs are met. Our technical sales team will attend and assess the site to ensure that the client receives a solution that fully integrates into their infrastructure, and will work with the client to ensure the equipment complies with all applicable local laws and standards, whilst still providing the optimum solution in terms of flexibility, efficiency and production.

ABHS achieve this by treating each project as a unique one, engineering our equipment around

CASE STUDY





the specific application with customized designs where necessary, and designing the ultimate solution for the job. We are driven by satisfying the customer's project requirements, using our extensive operational and technical experience and knowledge in this industry.

## OTHER BARGELOADING AND UNLOADING PRODUCTS

Astec Bulk Handling Solutions design and install mobile bulk material handling products for the Ports and Inland Terminals industry to handle grain, fertilizer, biomass, iron ore, coal etc. These solutions can be customized to suit each individual application.

These products include truck unloaders, barge loaders and unloaders, radial telescopic barge loaders, hopper feeders and stacking conveyors.

## ABHS PROMISE TO YOU

As part of Astec Industries, Astec Bulk Handling Solutions (ABHS) share their commitment to "grow and prosper by designing, manufacturing and selling the most innovative, productive and reliable equipment for the industries we serve, coupled with unparalleled customer service."

We have a portfolio of global reference sites and customize each project to your exacting needs. We see the benefits in getting involved from the earliest stages of a project and customers can benefit from our application and industry experience.

**To discuss your project, please contact a sales representative on 541-735-0748 or email [sales@astecbulk.com](mailto:sales@astecbulk.com).**



**PROUD  
TO BE MADE  
BY AN  
AMERICAN  
COMPANY**

## ABHS AFTERSALES

Astec Bulk Handling Solutions is part of the Astec Industries family of companies. Astec Industries, a NASDAQ listed US Corporation based in Chattanooga, Tennessee, has a turnover of \$1billion. Being part of the Astec Industries family of Companies insure that ABHS delivers around the clock service, around the world.

Astec Bulk Handling Solutions will continue to strive for new ways and better solutions. We look forward to serving our customers of today and tomorrow with innovative products and excellent service. We are committed to you and your business.

