Introduction

Traditional ship unloading in ports and terminals varies. There is the fully integrated ship to stockyard systems, incorporating grab cranes, hoppers, conveyors and stackers or reclaimers for fully dedicated berths. Alternatively, the system for multi-cargo berths operates grabs, hoppers, trucks to the specific stockyards. The main issue with the latter system, is how to efficiently stack the material in a safe and environmentally friendly manner. Telestack mobile stacking and truck unloading solutions are particularly effective when stockpiling multi-cargo in a remote stockyard, which allows the customer to stockpile differing types and grades of materials in various locations.

For ports which operate multi-cargo berths or stockyards, Telestack’s mobile equipment can offer the flexibility to stockpile up to heights of 17 meters at a rate up to 2,500 tonnes per hour, using a range of truck unloaders and mobile radial telescopic conveyors. This automatic stockpiling system eliminates the segregation, degradation and compaction of the material within the stockpile, which ensures the material characteristics are maintained. Also, it can be used as a backup stacking system in the event of failure or during statutory maintenance of a dedicated stacker or reclaiming system (see Figure 1).

This stockpiling unit can be installed with a crawler tracked dolly unit or wheeled dolly unit for full site mobility in harsh ground conditions. This site mobility ensures the operator can use this equipment anywhere within the stockyard when required. In many instances, these units are multifunctional, utilized for both stockpiling and ship loading applications up to Panamax size.
size vessels, with the radial telescopic features offering maximum maneuverability and flexibility during both processes.

In many applications, a fully automated integrated system would not be feasible to the particular port and inland terminal with lower capacities, which could not justify the high capital expenditure of the overland conveyor and stacker or reclaimer systems. As shown in Figure 2, the popular method for multi-cargo berths would include grabs, hoppers and trucks to the specific stockyards. These trucks would transfer the bulk material directly to the stockyard. Primarily, these trucks would dump the material within the stockyard, then loading shovels or excavators would be used to stockpile the material, either with a loading shovel driving up and down stockpiles or a number of excavators used to achieve the required stockpile height and capacity, as shown in Figure 3.

This is not an effective stacking method, with extensive contamination and double handling of the material, which leads to increased operational and production costs. The Telestack mobile solutions offer a range of mobile truck unloaders and stackers which can eliminate these common problems.

In specific stockpiling applications directly from trucks, Telestack offer a range of mobile truck unloaders which can transfer the load directly from the trucks to a stockpile. This unit can include a radial facility, which again allows maximum flexibility to stockpile up to 10 meters. This efficient stockpiling method eliminates the double handling of the material and allows the operator to stockpile directly from this single unit. Also, the mobility of this unit means it can be easily moved around the stockyard, according to the requirements of the operator.

This range of truck unloaders can be used in conjunction with the radial telescopic stacker to achieve the greater stockpile height and capacity if required. The combination of these two mobile units, for both stockpiling and ship loading, offer the customer complete flexibility, safety and efficiency, taking into consideration required stockpile heights, capacities and types or grades of materials within typical multi-cargo berths.

The overall benefits of this range of equipment includes:
1. Dual functionality, both for ship loading and ship unloading operations, which eliminates overhead costs for secondary equipment
2. Ease of transport from stockyard to quayside
3. Range of truck unloaders utilized as a stacker or shiploader or feeding the radial telescopic stackers
4. Wide range of dust suppression or containment and trimming facilities
5. Operational movements range from in line, radial, parallel and many more
6. Hatch changes normally only require parallel movement – no need to reverse out if the vessel is geared
7. Cost effective solutions
8. Customized solutions to meets the needs of any application

These mobile systems highlight Telestack’s aim to provide for the specific needs of each application to ensure the equipment is efficient and reliable during these types of operations.

**ABOUT THE COMPANY**

Telestack Limited specialize in the design, manufacture and installation of a complete range mobile coal handling systems for operation in ports, power stations, steel mills and cement kilns. The range of equipment takes into consideration the ‘day to day’ operational capabilities of coal handling, consisting of shiploading or unloading, stockpiling, reclaiming, truck unloading and linking conveyors. The Telestack equipment offers the operator cost efficient solutions with unrivalled mobility and flexibility. Telestack currently have installations globally with some of the worlds largest coal producers and processors including, BHP Billiton, Mechel, Suez, Rio Tinto and many more.