



4 x TS 3042 Radial Telescopic Shiploaders



CASE STUDY

HIGHLIGHTS

COUNTRY/REGION: India

END USER: JSW Infrastructure

PRODUCT: 4 x TS 3042 Radial Telescopic Conveyors

APPLICATION: Bargeloading & Handy-max loading

MATERIAL TYPE: Coal and Iron Ore

TONNAGE: Up to 3,000 tph iron ore
Up to 1,800 tph coal

Background

JSW have in recent years been developing their Port of Jaigarah, Maharashtra, India and are one of the leading private infrastructure companies in India. As part of the infrastructure development a new dedicated bargeloading jetty has been constructed and Telestack equipment is proving pivotal in their plans to increase its capacity to handle 50 million tonnes p/a with a total of 10 berths.

Telestack were chosen as the preferred suppliers for this project in early 2014, having supported the JSW project and engineering teams to develop concepts and layouts from the project inception several years ago. The units supplied to JSW were 4 x TS3042 Radial Telescopic bargeloaders. These high capacity and

high specification units were custom designed for JSW taking into account a wide range of operational requirements from the Client.

Application

The units are 42 metres long and have 17 metre inner telescopic boom. The rated capacity of each machine is 3,000tph of iron ore and 1,800tph of coal. The 4 units having a combined loading capacity of 12,000tph of iron ore or 7,200tph of coal making it one of the highest capacity bargeloading jetties in the world – if not the largest. The units will be fed by 2 x 6,000tph stacker reclaimer via a series of static conveyors with flow of one stacker reclaimer split over 2 bargeloaders.



JSW INFRASTRUCTURE



FEATURES

- Control panel and control station located in the operators cabin to allow the operator to control the function of the machine from various positions. Radio remote control of all functions
- Double idler Schenck belt weigher for accurate monitoring of load rate and batch weighing of each barge
- Anemometre which will automatically shut the system down in the event of the wind speed exceeding that of a safe and permitted level
- Removable Hardox wear liners on the feedboot hopper and transfer chute
- Dual access galvanised walkways
- Custom designed directional chute for trimming of the vessel

RESULTS

In the last year, 1.8 million tonnes have been handled by Telestack TS3042 Radial Telescopic units since April and they have a projected output of 4 million tonne in 2019.

Each unit is equipped with features to both ensure safety of operator, ease of use and maximum reliability and performance.

In terms of electrical items, each unit has a main maintenance control panel as well as a control station located in the operators cabin and a radio remote control to allow the operator to control the function of the machine from various positions. Each unit has a double idler Schenck belt weigher for accurate monitoring of load rate and batch weighing of each barge. The operator cabin comes with air conditioning as standard with ergonomic operators seat and wind screen wiper to enable operation in fluctuating weather conditions.

The bargeloaders are also equipped with an anemometre which will automatically shut the system down in the event of the wind speed exceeding that of a safe and permitted level. Belt skewing switches, block chute sensors, tail shaft rotation monitor undercarriage and walkway pull chord switches and anti-collision switches on the boom are only some of the field devices on the units to ensure safe operational use – something that is paramount in all Telestack designs, Siemens motors and Nord gearboxes ensure a reliable drive system for the high capacity bargeloaders.

Each unit is equipped with removable Hardox wear liners on the feedboot hopper and transfer chute, while the deflector chute has removable ceramic tiles with metal back plates and studs to ensure ease of removal and replacement for the high wear area.

The deflector chute is a new design to allow the operator to refine the exact placement of material in the forward/ aft position. This, coupled with the units radial luffing and telescopic functions, ensures

maximum efficiency and accuracy during the trimming stage of bargeloading. The units all have dual access walkways to British standard. All walkways are hot dip galvanised to ensure excellent corrosion protection.

The main structure of the bargeloaders is painted to Telestack "P3" Marine code which entails average dry film & of 250 microns of 2 pak epox paint with a high zinc solids primer. The units were painted in JSW corporate colours of dark blue and yellow to specific RAL codes.

Telestack also had to work to a maximum wheel loading of 10 tonnes per wheel due to design of the jetty. This required intelligent design of a structure to accommodate the high load rates but also limit the overall weight of the bargeloaders. The overall design was also verified and certified by a third party structural engineer. With a minimum angle of 6 degrees – a significant increase of loading was transferred to the units undercarriage. This area had to be plated to contain the additional stresses imposed due to the lower angles. Storm tie down lugs and



shackles were provided on the unit due to the port being in an area prone to cyclones.

The units have been dry commissioned in conjunction with Telestack's Ports and Terminals distributor Portrucks. Portrucks have an excellent reputation in this sector in India for Aftersales service and maintenance and are well placed to respond to the needs of this remote site.

Telestack Range of Shiploading Equipment

Telestack specialise in the complete design, manufacture, installation and commissioning of mobile, bulk material handling systems for the inland ports and terminals, aggregates and mining sectors.

Their range of Port equipment encompasses radial telescopic shiploaders, shiploading direct from trucks, direct feed shiploaders, rail mounted shiploaders, cambered boom shiploaders and dockside unloading hoppers.

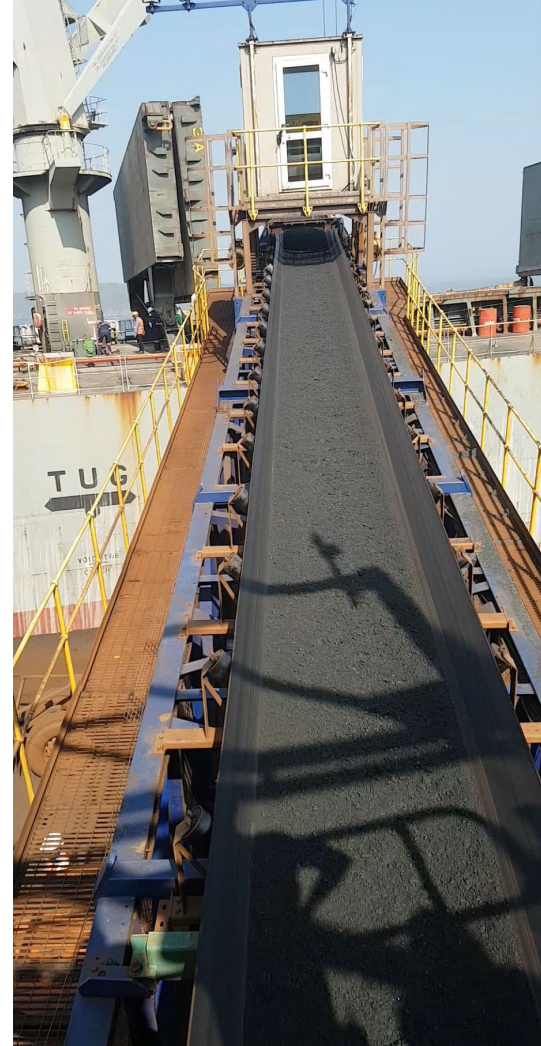
To complement your particular application, Telestack also offer an extensive range of options so that your shiploading units are specific to your needs.

How to Contact Us

Telestack are renowned throughout the globe for their personalised service. The team of engineering and sales specialists work very closely with you throughout each stage of the process from pre-sales and pre-engineering to ensure that the equipment is specific to your project. Our product portfolio is vast as is our application knowledge.

Our experienced sales personnel will happily discuss your project with you and we have a range of global reference sites in multiple applications to tell you about. Call us on **+44 2882 251100** or email sales@telestack.com for a preliminary consultation about your project.

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