



Case Study

Grain Loading at Ukrainian Port - Unique Radial Telescopic Shiploader replaces several Gantry Cranes

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A new radial telescopic shiploader was installed in an Ukrainian port for the rapid loading of grain. Special features like the partially rail mounted design for parallel movement along the berth make this shiploader a unique machine.

(From the archive of "[bulk solids handling](#)", article published in Vol. 35 (2015) No. 2 , ©2015 bulk-online.com)Telestack has recently delivered a new TS 550 radial telescopic ship loader to Ukrainian stevedoring company Transervic, which operates in the Port of Illichivisk. "The machine, which was ordered in November 2013, was despatched in August 2014 and commissioned in November 2014," recalls Telestack sales manager Philip Waddell.Quizzed as to why Telestack had secured the order, Mr. Waddell notes that there were several reasons.



Grain being fed to the custom designed TS 550 shiploader. (Pictures: ©Telestack Ltd.)

“First up, they liked Telestack’s ability to design and supply a machine to suit their individual application and site parameters. However, we were also able to offer local service and after sales back up via our Ukrainian dealer YTS, which was certainly well appreciated. Last, but not least, we demonstrated to the client that we already had a significant number of machines handling grain in Ukraine, with

large grain producing companies such as Nibulon,” he says. Telestack had supplied 13 of these customised units to Nibulon in 2010 and 2011. They were also awarded ‘Best Shiploading System in 2010’ by the ‘International Bulk Journal’. Prior to the arrival of the TS 550, Transervic had been using old Russian gantry cranes, which were very slow in terms of loading capacity. They also were highly costly to maintain and were unreliable due to their age. In contrast, the Telestack system will give them better reliability, increased capacity and also lower operating and maintenance costs, stresses Mr. Waddell. The TS 550 shiploaders that Telestack produces are all custom-designed machine, reflecting the individual applications they are required to fulfil and also prevailed site parameters. Nevertheless, Mr. Waddell concedes that there were certain challenges in respect of the Transervic order that the company’s Sales & Engineering team had had to overcome.



Telestack TS 550 Rail Mounted
Shiploader fitted with optional lights
and dust containment system loading
grain at up to 600 tph.

Innovative Technology

The most significant challenge was that, although the TS 550 needed to be designed to travel parallel on rails at the front end, there were no rails available

at the back end. Telestack engineers had to come up with a parallel travel system with rail bogies at the front - on which ultimately the main weight of the machine would rest - and also pneumatic wheels at the rear. The machine also had to have a radial function for trimming. This meant that the design had to reflect a need for the front rail bogies to be raised off the ground to, in turn, allow the radial wheels to engage with the ground, so that the machine could radial for purposes of trimming the vessel. Such a design Telestack had only supplied on units for Nibulon. Another challenge was that the berth on which the TS 550 was to be deployed handles a variety of cargo, much of which arrives by rail. The TS 550 therefore had to be designed to be easily and quickly moved out of the way of inbound rail wagons.

A green Machine



TelestackTS 550 shiploader with 360° trimmer for optimum hatch loading.

The Transervic machine incorporates a dust containment system, meaning it is totally enclosed. Furthermore, the TS 550 is electrically powered, driven by a three-phase mains power supply from the jetty via cable reel, thereby cutting out unnecessary diesel fumes. In terms of productivity, it can load up to 600 t/h of grain at a density of 0.7 t/m³. The TS 550 will mostly be handling grain, but also

some soya bean traffic, as well as cake and meal for animal feed. Local after sales agent and Telestack distributor YTS is providing all future service and maintenance back up on the TS 550, which has been designed to be as easily maintained as possible. In summary, Mr. Waddell points out that the TS 550 as delivered offers a parallel travel facility utilising existing jetty rails; incorporates a radial facility for the trimming of hatches; provides luffing from 14° to 27°, thereby allowing it to work hatches on board a Panamax vessel; and boasts near perfect dust containment thanks to the use of dust covers, enclosed transfer points and the incorporation of a Cleveland cascade chute with a 360° trimmer.

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