

# Bedeschi responds to new challenges



**Pietro De Michieli, Chief Operating Officer,**  
 Bedeschi S.p.A, Padova, Italy

In an increasingly globalised world, port infrastructure is changing quickly. There is often the need to handle bulk material not at land-based quarries, but at sea with ships that are becoming larger and larger. It has become clear that in order to guarantee efficiency in ports and terminals, there needs to be a paradigm-shift if the positioning and volume of stored bulk material is to be optimised, loading and unloading times are to be reduced, and functional and eco-friendly practices are to be found across the supply chain.

## Shiploaders

Bedeschi has a long history as a supplier in the bulk handling sector, and thanks to its vast experience, it is able to produce a wide set of shiploaders for on-shore installations as well as transhippers, which are utilised in cases in which the loading/unloading process, due to the port size, has to be done away from the port.

Each shiploader is designed to fit the specific project requirements and the client's specific needs. This is why Bedeschi supplies customised shiploaders - to maximise efficiency according to the features of each idiosyncratic project. Some shiploaders therefore have a shuttle type delivery boom with reversible belts, while others have a retractable mechanism capable of extending outreach. Others have been fitted with a straight delivery spout, while some have incorporated a distributing chute designed to deliver cargo into all parts of a ship's hold in order to avoid uneven loading.

In an effort to exhibit the care and attention Bedeschi offers each of its unique customers, several important case studies have been undertaken in order to display Bedeschi's capability to satisfy a customer's specific requirements.



Figure 1: Shiploader screw type operating view

<b>Material</b>	:	Cement
<b>Size</b>	:	millimetres (mm) 0 to 1 mm
<b>Design capacity</b>	:	tonnes per hour (t/h) 900

Project data: case study 1

## Case study 1: Titan - Greece

Bedeschi was awarded a shiploader contract in May 2012 with Titan Cement Company, an organisation located in Elefsina, Greece. It was a complete turnkey project, with engineering, design, construction, erection, commissioning and start-up all carried out by Bedeschi.

## The loading process

During the shiplading process, a shiploader moves along the quay on a portal travelling device and then receives the bulk material (which in the Titan case was cement and clinker) from the tripper car on the fixed quay gallery belt conveyor. The portal travelling device has two groups of twin wheels located on its corners and runs on rails. The upper part of the portal is equipped with a transfer screw-conveyor and receives material

from the tripper car installed on the gallery quay conveyor. The delivery is the same to the main screw-conveyor installed on the boom of shiploader.

The portal screw-conveyor is equipped with a bag filter suitable both for the ducting of transition points between tripper and the portal screw conveyor, and for creating a vacuum atmosphere into the same screw-conveyor.

The slewing part of the shiploader consists of a rotating frame superstructure, a supporting luffing boom equipped with the main screw-conveyor, and a telescopic loading chute. On the top part of the slewable boom there is another bag filter dedicated to the ducting of the telescopic loading chute which functions as an extraction system to create a vacuum atmosphere in the hold of an ocean vessel.

The telescopic chute is operated by a cable winch optimised for vertical