

Bedeschi leads the way

Bedeschi SpA was established in 1908 and is today one of the oldest European companies specialising in bulk handling. The fourth generation of the Bedeschi family is currently leading the Group



For many years Bedeschi has been entrusted by many prestigious clients worldwide to help them overcome various marine infrastructural bottlenecks, both onshore and offshore. These clients have valued the innovativeness and capability of Bedeschi, to understand their exact requirements and to design and implement solutions, which are suited specifically to their projects' requirements.

The latest example of the various solutions implemented by Bedeschi is Floating Transfer Station (FTS) Emco I, delivered to Russia as a part of Shakshtersk Port to support their clients, East Mining, for enhancing their cargo handling capacity to eight mt/yr. The FTS has been fully renovated and has been adapted to cater to the new operational needs by Bedeschi jointly with its partners. Particular emphasis has been laid on the environmental protection, particularly dust emission, so as to render the system totally Green. The FTS is equipped with two heavy duty Liebherr cranes, which deliver cargo into two hoppers fitted adjacent to the cranes. Each hopper has been fitted by a 1,300 t/hr feeder belt which helps in uniform material extraction and transferring to the belt conveyors. An array of belt conveyors transfers the coal to a 2,500 t/hr capacity shiploader designed to load vessels up to panamax size.

Another project commissioned by Bedeschi in 2019 is the Transshipment Vessel (TV) River King. This project has been implemented to cater to the coal imports requirements of Hub Power Company, the largest independent power producer of Pakistan. Owing to the draft restriction at Karachi Port, the TV has been deployed at the harbour where deep water is available to receive capesize vessels.





The TV transfers the coal from the OGVs into barges, which then transport the coal to the port for discharge.

The cargo handling system has been completely designed and produced by Bedeschi based on the requested requirements and functionality of the system for the transshipping of coal.

The cargo handling system comprises of two double receiving hoppers, which receive coal from four side mounted Liebherr cranes. Each hopper is fitted with variable speed driven feeder belts. The feeder belts actually act as coal extractors from the hoppers and deliver the coal on to fixed longitudinal belt conveyors leading to slewing and luffing type loader to deliver the coal into the receiving barges moored alongside at 2,500 t/hr.

The system has also been equipped with automatic sampling device, online weighing scale and metal detectors. This TV is the life line of the power plant and is successfully engaged in helping the power plant receive coal for its needs.

The above two projects have been implemented for handling coal - one for loading and other for discharging. Both are being used to overcome the infrastructural bottlenecks of two different ports. With the implementation of these transshipment systems, both ports are now capable of handling large vessels, thereby eliminating their restrictions. These systems can operate in adverse weather conditions and are fully relocatable. They were implemented under strict time schedules and adhere to stringent environmental norms.

Another project under advanced stage of implementation is for handling iron ore pellets in the Arabian Gulf. Bedeschi has been awarded a contract for the supply of complete cargo handling system for a prestigious offshore transshipment project in the United Arab Emirates. The contract which was awarded by Abu Dhabi Ports (ADP) to Bedeschi, once again demonstrates the confidence which the majority of clients have in Bedeschi's vast experience and expertise in the field of offshore transshipment of dry bulk cargo.

Emirates Steel Industries (ESI) is situated in the Mussafah industrial area of Abu Dhabi and receives iron ore pellets as the basic raw material for the steel making process. The iron ore pellets have to be received at their jetty, which is located on the 53km long Mussafah channel, connecting to the Arabian Sea. The depth of the channel is only 9m restricting the movement of large vessels. It is therefore imperative that the iron ore pellets

be transferred into barges, which can then transport them to the ESI jetty. At the jetty ESI has a shore receiving hopper, connected to their plant by an overland conveyor. The barges deployed are bottom discharging type and have a delivery boom, which can deliver the pellets in the hopper. The entire transshipment, channel transportation and discharging contract has been awarded by ESI to ADP. For serving this contract, ADP needs to convert a bulk carrier into a transhipper.

The project thus entails conversion of a bulk carrier into a self-loading and self-discharging transhipper vessel (TV) to discharge iron ore pellets from Ocean Going Vessels (OGVs) into barges. The OGV on arrival at the designated anchorage, will drop anchor and a double banking operation of OGV and TV will be carried out in the open sea. The barges will then be berthed alongside the sea side of TV in triple banking. Pellets will then be transferred into the self-discharging barges by a combination of cranes and cargo handling system installed on the TV. The barge once fully laden, up to the allowable draft, will then cast off and transport the pellets to the ESI jetty. Another barge will then take its place and the operation will continue. A carefully worked barges cycle calculation ensures maximum utilization of the barges thereby reducing the waiting time of OGV. However, while the TV is waiting for the barges, or during the barge's changeover times, the discharging the OGV continues and the pellets are stored in the holds of the TV, which will be then be transferred to the barges, once they are available. The priority remains the expeditious discharge is the OGV within the allowed time. The TV needs to guarantee a discharge rate of 35,000 t/dy of the OGV.

The TV is equipped with four heavy duty side mounted Liebherr cranes and a cargo handling system comprising of hoppers, feeder belts and an array of conveyor belts leading to a slewing, luffing loader to deliver iron ore pellets into barges moored alongside.

With critical operations like this, clients have to rely on companies which not only have the experience but also the ingenuity to come up with designs to suit the exact requirement of the clients. Bedeschi has a fully developed technical team which can translate any innovative ideas into workable design. The manufacture of the critical equipment is done by Bedeschi in the manufacturing facilities owned by them right in their premises. Bedeschi strives to excel in the manufacture of cargo handling systems and continue to lead from the front ■

