

E-CRANE®

FLOATING BULK HANDLING TERMINAL



E-Crane's Floating Bulk Handling Terminal

10 years ago E-Crane® delivered the first barge and ship mounted E-Cranes to offload barges and small ships. E-Crane® has adapted this great concept for the offloading of ships up to Panamax-class and has more than 15 units successfully operating world-wide. These barge or ship mounted E-Cranes have been developed in close cooperation with our clients. The concept of a floating bulk handling terminal is well suited for both port operations (ship-to-shore) as well as midstream transfer (barge-to-ship and ship-to-barge).

The E-Crane® organization is always open minded when it comes to solving our clients special needs and requirements. This famous "can-do" attitude has resulted in "cutting edge" solutions that have successfully served our customers world-wide. The development of the E-Crane® Floating Bulk Terminal is another logical step in the evolution of this unique material handling concept.

Floating transloading terminals address a host of material handling needs that are present in today's rapidly changing environment. This concept offers the following benefits:

- the complete terminal can be build and tested and then floated to its final destination
- terminal can be located at the closest possible location to the mine
- at the preferred transfer point
- near the end-user
- and all this with limited local regulatory requirements
- the complete terminal can be relocated quickly and cost effectively if required
- the minimum investment combined with a short delivery time provides for an excellent return of investment
- the option to have a floating buffer storage to smooth out any peaks and valleys between inbound and outbound material deliveries

These advantages combined with the state-of-the-art, proven E-Crane® technology result in unmatched productivity and an extremely versatile; fully integrated solution for today's bulk handling industries.



The floating terminal offloads between 20 and 25 barges (1800 ton/barge) per day. Year after year, close to 6 million tons of bauxite is transferred in an 8 month time window...



Global Materials Services de Venezuela (GMSV)

The GMSV floating terminal is located near a bauxite unloading facility along the Orinoco River in Venezuela. This floating terminal was developed to improve the bauxite unloading at the existing port in this important region of Venezuela. The previous system of bauxite unloading had several limitations: poor serviceability and availability of the existing unloading equipment as well as interference of barge unloading with ship loading since the existing dock was used by ships as well as barges.

The upgraded floating barge unloading terminal is now built around two equilibrium cranes mounted on an ocean going barge.

The two E-Cranes unload all the bauxite for the nearby alumina producer (CVG Bauxilum). This material originates from the El Jobal mine located 650 km downriver and is transported by barge.

Equipped with 2 E-Cranes, one with 15 tons, the larger with 25 tons lift capacity this installation has a proven bauxite unloading capacity of close to 6 million tons in an 8 month time window (navigation season) ! The terminal has been in successful operation since early 2002 and is proof of E-Crane's excellent reliability and ease of operation in an extremely tough environment.

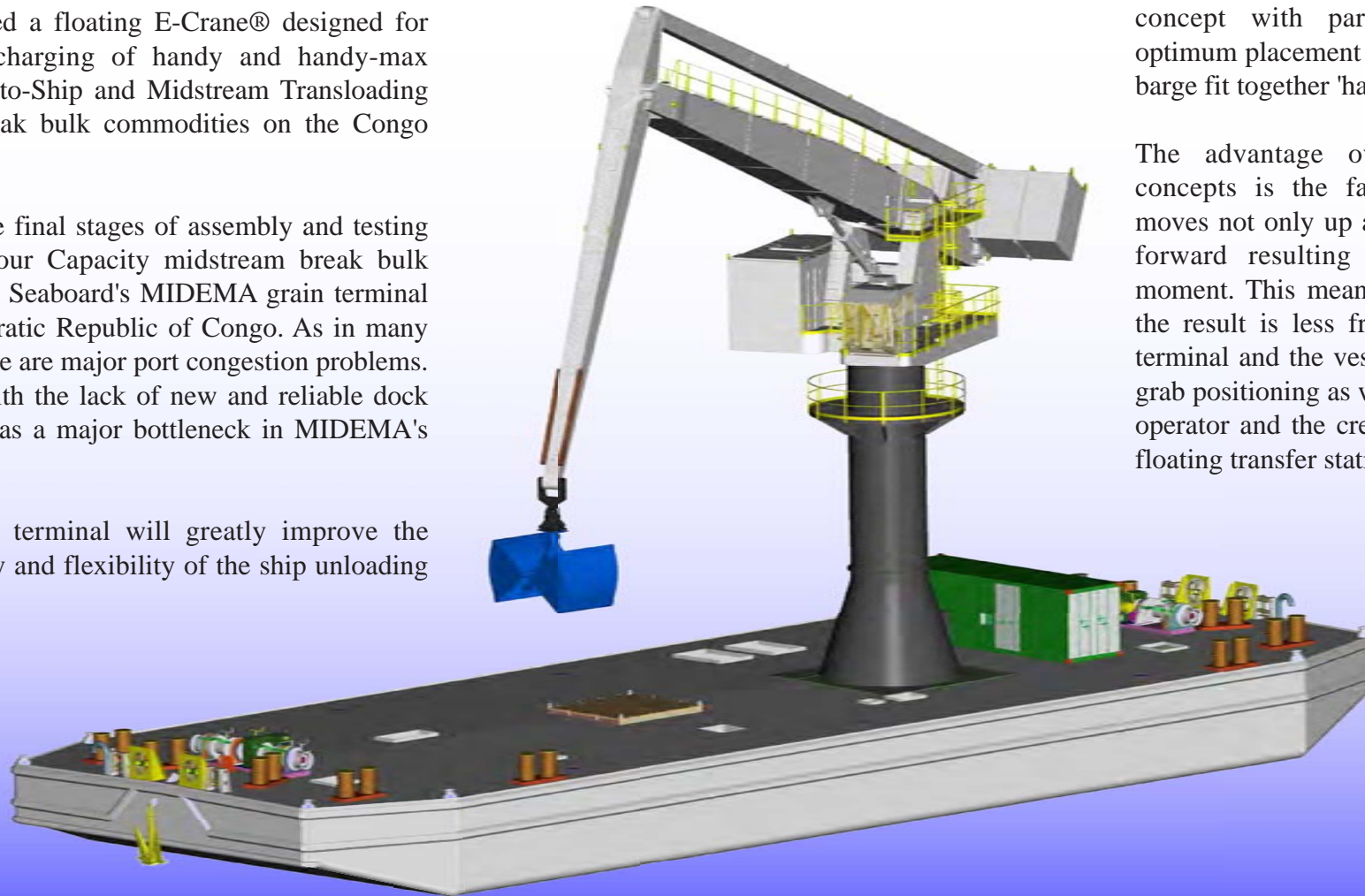


“Seaboard’s Midema Midstream Transfer Facility is a cutting edge floating terminal on the Congo River in Matadi, Congo specializing in the movement of dry bulk and break bulk cargos.”

This client required a floating E-Crane® designed for Ship-to-Quay discharging of handy and handy-max vessels with Ship-to-Ship and Midstream Transloading capabilities of break bulk commodities on the Congo river.

E-Crane® is in the final stages of assembly and testing of the 400 Ton/hour Capacity midstream break bulk transfer station for Seaboard's MIDEMA grain terminal in Matadi, Democratic Republic of Congo. As in many ports in Africa there are major port congestion problems. This, combined with the lack of new and reliable dock side equipment, was a major bottleneck in MIDEMA's grain supply chain.

The new floating terminal will greatly improve the capacity, efficiency and flexibility of the ship unloading operations.



E-Crane Floating Transloading Terminal

Custom engineered to meet customer requirements

Conceptual design studies were carried out in close cooperation with the customer to determine the optimum floating terminal concept with particular emphasis on the optimum placement of the E-Crane®. Crane and barge fit together 'hand in glove'!

The advantage over other floating crane concepts is the fact that the counterweight moves not only up and down but also back and forward resulting in a very small tipping moment. This means less barge movement and the result is less friction between the floating terminal and the vessel, more precise and faster grab positioning as well as more comfort for the operator and the crew working on board of the floating transfer station.

With this new E-Crane® floating terminal, Seaboard offers the owners, operators, and charterers of cargo vessels a very competitive alternative to traditional shore side terminals and berthing. In addition, they offer comprehensive assistance with all facets of cargo movement through their terminal.