

SHIP LOADER UPGRADE

Alpart, Port Kaiser, Jamaica



Figure 1

ENCO provided design and construction services for a new Ship load-out Boom handling 1000 tph Alumina. The existing ship load-out boom did not provide sufficient reach for Panamax size vessels and dust control was non-existent as shown in Figure 1.

The new Ship load-out boom utilizes a telescoping box truss design; the box truss design provides 13.7 meters (45 feet) horizontal travel and a total of 19.8 meters (65 feet) reach outboard of the pier fender line. The load-out boom was constructed of 6061-T6 aluminum to minimize the overall weight and load transfer to the existing pier. The existing Gantry support structure was modified to accommodate the new load out boom. Two (2) 1.0 meter wide air-slide conveyors transport alumina from the pier conveyor to a telescopic discharge spout.

Upon completion of the project, Alpart was loading Panamax size vessels at a rate of 1000tph “dust free”. Figure 2 shows the load out boom with service platform in the maintenance position.



Figure 2

Design engineering for ship loader upgrade

- *Analysis of existing structure*
- *New boom providing extended reach*
- *Light weight aluminum construction (boom)*
- *Telescoping airslide*