

# Horizontal and vertical screw conveyors for a large-capacity ship unloader

Customer: IBAU Hamburg, Germany

Realization: March 2012

**Z 5617**



Final equipment fitted with manufactured conveyors



Assembly of horizontal conveyors

## ***Customer's requirement***

On the basis of the customer's requirement for unloading 15.000-60.000 dwt, IBAU Hamburg came up with a new design of a ship unloader. It was a state order of the city state Singapore in Malaysia.

## ***Task, final formulation of design***

DSD – Dostál, a. s. manufactured parts of the ship unloader – one vertical screw conveyor  $\varnothing$  500 mm and two horizontal screw conveyors  $\varnothing$  700 mm based on documentation supplied by IBAU Hamburg. In this order DSD – Dostál, a. s. used its experience of previous realizations of similar ship loaders and unloaders.



**Assembly of horizontal conveyors**

***Description of the final design discussed and approved by the customer***

The new unloader of weight approx. 240 tons ranges among lighter designs. The unloader of conveying capacity 800 t/h was designed for work in the harbor. For the material transport principles of screw and fluid conveying were combined. The material is taken from the ship by means of the vertical screw conveyor  $\varnothing$  500 mm and contra-running inlet feeder. The material is transported then by the horizontal screw conveyor  $\varnothing$  700 mm as well as the connected fluid transport that simultaneously allows loading into tanks. The vertical conveyor 21 m long and horizontal conveyor 23 m long can even unload ships of the so called panamax-class.

**Assembly of vertical conveyors**



***Explanation why this order is extraordinary – final evaluation of the order***

Manufacture of this equipment was unique not only with regard to the extent itself demanding from the point of view of organization and technology but also very short time period of the order realization because of the deadline determined for loading of goods on ships to Singapore in Malaysia.

**Oval shape measurement**



**Assembly of horizontal conveyors**

