

Marine Selfunloaders

Gravity system



TECHNICAL INFORMATION

Sandnes

MacGregor gravity system

Self-unloading equipment for handling frozen lumps of crushed marble has been installed on the 28,000 dwt newbuilding, *Sandnes*

In April 2005, the 28,000 dwt self-unloading vessel *Sandnes* was delivered to Reederei Hans-Jürgen Hartmann, Germany, and is the third newbuilding equipped with a MacGregor gravity self-unloading system at J J Sietas Schiffswerft in Germany. The purpose-built selfunloader is intended to transport stone and gravel between ports in northern Europe. Discharge capacity is rated at 3,000t/h.

The MacGregor self-unloading system includes basket gates and conveyor systems, which are especially designed to handle frozen lumps of crushed marble. The 85m-long boom conveyor gives the vessel great adaptability at receiving facilities. Its noise level is notably low, which allows for environmentally-acceptable discharge, even in urban areas.

System description

The self-unloading system comprises one row of hydraulically-operated basket gates feeding material from the cargo holds onto a longitudinal hold conveyor located on the ship's tanktop. From the hold conveyor the material is transported to the C-conveyor which elevates the material above deck level to the boom conveyor.

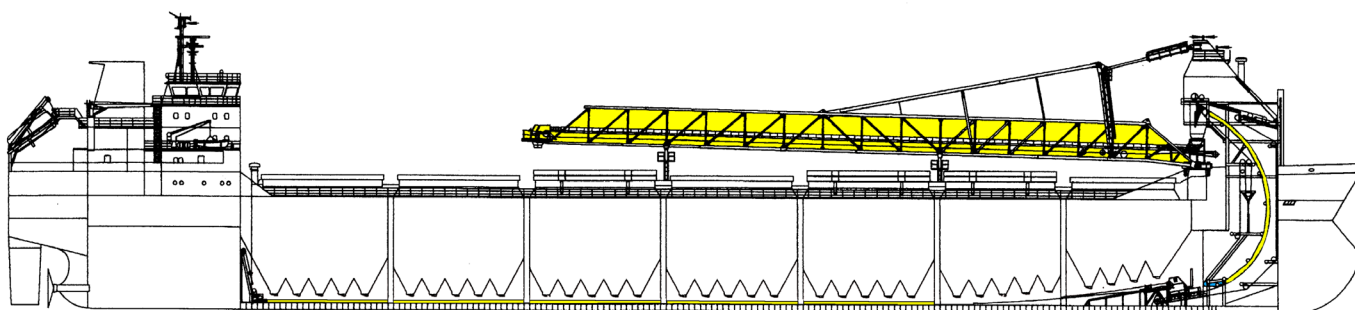
The boom conveyor can slew to either the port or starboard side for conveying the cargo to existing shore-receiving hoppers or for discharge directly to the stockpile. The self-unloading system is operated and controlled from a control room located on A-deck in the ship's accommodation.

Vessel dimensions

Length overall	166.30m
Length between p.p.	161.15m
Width, moulded	24.5m
Depth	14m
Draft	9.0/10.5m
Dead weight	28,000 dwt

System data

Discharge capacity	3,000t/h or 2,000 m ³ /h
Boom conveyor length	85m
Cargo	stone, gravel, crushed marble and aggregate



Design principle of the self-unloading system

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