



# ATLANTIC STAR: Ro-ro/Containership

Shipbuilder: **Hudong-Zhonghua Shipbuilding (Group) Co. Ltd, China**  
Vessel's name: **Atlantic Star**  
Hull number: **1695**  
Owner: **ACL Vessel One H1695A AB**  
Operator: **Atlantic Container Line AB**  
Country: **Sweden**  
Technical Manager: **Grimaldi Group S.p.A.**  
Designer: **Knud E. Hansen (Based on patent by Mr. Jens M. Nielsen)**  
Country: **Denmark**  
Model test establishment used: **Marin (Wageningen) Liverpool, UK**  
Flag: **Liverpool, UK**  
IMO number: **9670573**  
Total number of sister ships already completed (excluding ship presented): **0**  
Total number of sister ships still on order: **4**

On 27 October 2015 Hudong-Zhonghua Shipbuilding in China delivered the first of five Con-ro vessels to Atlantic Container Line. This was the culmination of a contract entered into force on 20 July, 2012. The series of five vessels will be operated by Atlantic Container Line AB (ACL).

The five new vessels will be the world's largest open top ro-ro/containerships at nearly 300m long and 38m wide. These G4 vessels will replace ACL's existing fleet of G3 vessels operating on the company's transatlantic service.

Bigger, faster, greener and more efficient than their G3 predecessors, the vessels are specially designed to handle a wide range of cargos efficiently, including containers, vehicles, heavy equipment, project and oversized cargo. This is achieved with the help of a large stern quarter ramp and four hoistable car decks.

Green features include an Alfa Laval single inlet hybrid scrubber to meet requirements regarding exhaust gas emissions and a shaft generator for electrical power derived from the main engine.

The G4 vessels have a container capacity of 3,820 TEU plus 28,900m<sup>2</sup> square metres of ro-ro space, with a car capacity of 1,307 vehicles. Cell guides will continue to be used on deck and open top cargo holds, a feature that will allow ACL to extend its record of never losing a container at sea in over 30 years.

Thanks to the revolutionary new design situating container cargo fore and aft of the accommodation and the ro-ro cargo mainly midship on all decks from the tank top and upwards, good stability is achieved while maintaining maximum loading flexibility between the different types of cargo.

With their superior capacity and flexibility these new vessels are an important and timely innovation for the industry.

## TECHNICAL PARTICULARS

Length oa: 296m  
Length bp: 287m  
Breadth moulded: 37.6m  
Depth moulded  
To main deck: 14m  
To upper deck: 22.95m

To other decks: 2.2m, 8.1m, 29.7m, 35.1m, 40m, 42.4m  
Width of double skin  
Side: 0.9m  
Bottom: 1.67m  
Draught  
Scantling: 10.25m  
Design: 11.50m  
Gross Tonnage: 100,430  
Deadweight  
Design: abt. 43,000dwt  
Scantling: abt. 55,649dwt  
Block co-efficient: 0.678 (10.25m)  
Speed, service (– %MCR output): 18 knots  
90% SMCR  
Bunkers (m<sup>3</sup>)  
Heavy oil: 3450m<sup>3</sup>  
Diesel oil: 400m<sup>3</sup>  
Daily fuel consumption (tonnes/day)  
Main engine only: -  
Auxiliaries: -  
Classification society and notations: RINA C \*  
containership; ro-ro cargo ship;  
unrestricted navigation; \* AUT-UMS;  
GREEN PLUS; ICE CLASS IC; INWATERSURVEY;  
MON-SHAFT; STAR-HULL  
Main engine(s) x 1  
Design: Wärtsilä  
Model: 2-stroke 8RT-flex68-D  
Manufacturer: Hudong Heavy Machinery  
Type of fuel: HFO and MDO  
Output of each engine: 22,000kW  
Propeller(s) x 1  
Material: Nickel aluminum bronze  
Designer/Manufacturer: Wärtsilä Propulsion  
Fixed/Controllable pitch: Fixed  
Diameter: 7600mm  
Speed: 96rpm  
Main-engine driven alternators x 1  
Make/type: SAM Electronics GmbH  
Output/speed of each set: variable  
2000kW to 1600kW  
Diesel-driven alternators  
Number: 4  
Engine make/type: 2xYANMAR  
8EY26LW(2245kW) and 2x  
8EY26LW(2450kW)  
Type of fuel: HFO and MDO  
Output/speed of each set: 720kW  
Alternator make/type: HHI  
Output/speed of each set: 720kW  
Exhaust-gas scrubbing equipment  
Manufacturer: Alfa Laval  
Type: Pure SOx Single-inlet, hybrid  
On main engines: Yes  
On auxiliary engines: No  
Boilers  
Type: Exhaust and oil fired  
Make: Kanggrim Heavy Industries Co. Ltd.  
Output, each boiler: 2,000 kg/hr  
and 2,500 kg/hr

Other cranes x 1  
Make: Ningbo Kairong Ship Machinery Co.,Ltd  
Mooring equipment  
Number: 2 mooring stations (4 winch aft, 2 fwd + 2 anchor / mooring)

Make: Rolls-Royce  
Type (electric/hydraulic/steam): Electric  
Special lifesaving equipment  
Number of each and capacity: 1  
free fall boat  
Make: Jiangsu Jiaoyan Marine Equipment Co. Ltd  
Type: JY-FN-9.5  
Hatch covers  
Design: None – only container stoppers  
Manufacturer: MacGregor  
Containers  
Total TEU capacity: 3,820  
On deck: 2,776  
In holds: 1,044  
Homogeneously loaded to 14tonnes:  
Reefer plugs: 209  
Vehicles  
Number of vehicle decks  
(fixed/moveable): no lanes - 28,900m<sup>2</sup>  
deck area  
Doors/ramps/lifts/moveable car decks  
Number of each: 1 stern quarter ramp,  
1 WT stern door, 2 internal WT doors,  
2 hinge ramps, 4 hoistable car deck,  
2 fire doors (cargo area),  
Designer: MacGregor  
Water ballast treatment system  
Make: Panasia type GloEn – Patrol 500  
Capacity: 500m<sup>3</sup>/h  
Complement  
Officers: 12  
Crew: 14  
Supernumeraries/Spare: 2  
Passengers x 12  
Number of cabins: 6  
Stern appendages/  
special rudders: flap rudder with  
Energopac (Becker + Wärtsilä)  
Bow thruster(s) x 2  
Make: Wärtsilä  
Output (each): 1750kW  
Stern thruster(s) x 1  
Make: Wärtsilä  
Output (each): 1750kW  
Bridge control system  
Make: Furuno and SAM  
Fire detection system  
Make: Microdata Due  
Fire extinguishing systems  
Cargo holds: -  
Make/Type: sprinkler (Garbarino pumps)  
Engine room: -  
Make/Type: HP CO<sub>2</sub> Unitor  
Vehicle spaces: -  
Make/Type: sprinkler (Garbarino pumps)  
Radars x 3  
Make: Furuno  
Model(s) Radar S FAR 2837S;  
Radar X FAR 2827; Radar X Far 2817  
Waste disposal plant  
Sewage plant  
Make: CSSC Nanjing Luzhou Machine Co.,Ltd  
Contract date: 20 July 2012  
Launch/float-out date: 24 March 2014  
Delivery date: 27 October 2015

