



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 3,820TEU plus 28,900m² 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 (m³)
 Heavy oil: **3450m³**
 Diesel oil: **400m³**
 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 - 28,900m² 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: **500m³/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 CO₂ 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**

