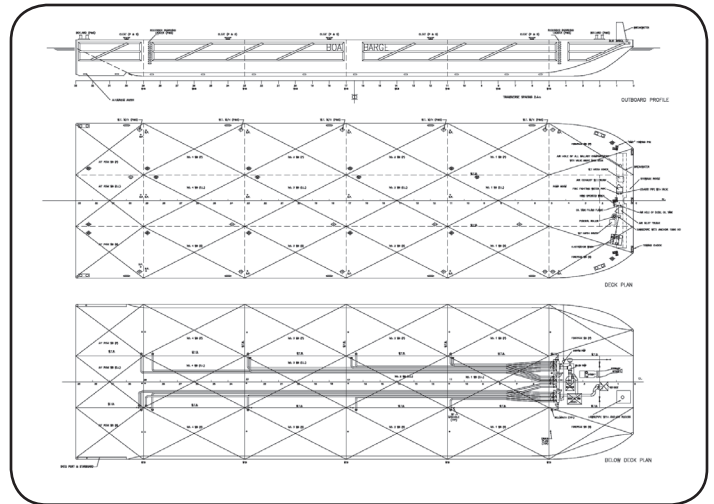




ATLANTIC MARLIN SPECIFICATION ATLANTIC SWORDFISH SPECIFICATION

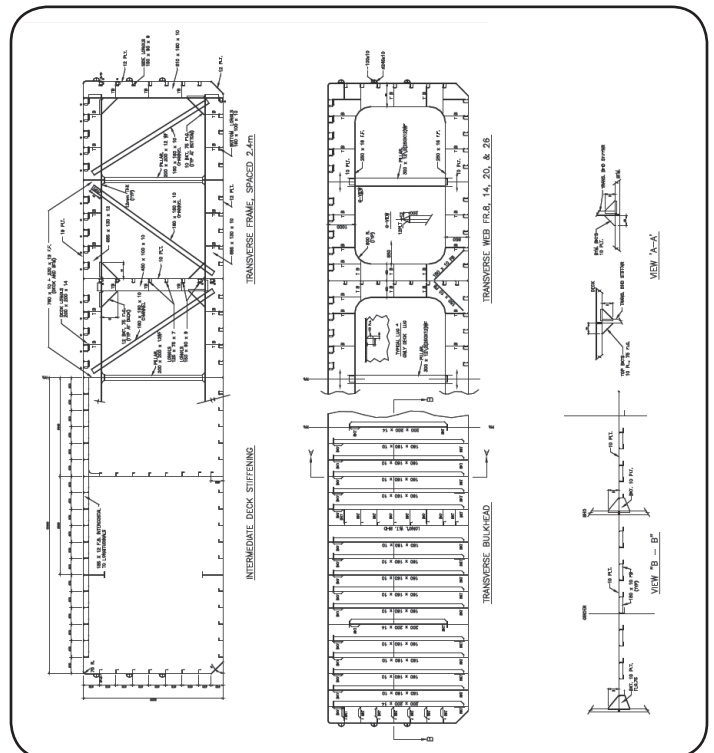
Oceangoing Heavy Deck Cargo Barges

Official Number	Atlantic Marlin / 834916 Atlantic Swordfish / 834915
Flag	Canadian
Port of Registry	Saint John, New Brunswick
Builder	Jinling Shipyard, Nanjing, China
Yard No.	BB17: JLZ 98 – 0711 BB18: JLZ 98 – 0712
Year Built	2000
Description	Barge
Tonnage	3734
Deck Load	Distributed - 10 tonnes/m ² Local Distributed - 20 tonnes/m ²
Main Propulsion	Non Propelled



Main Dimensions

- Length, oa: 79.20 m
- Breadth, moulded: 21.96 m
- Breadth, max.: ~22.30 m
- Depth, moulded: 5.20 m
- Draught, fully loaded: 4.00 m
- Deck area: ~1,680 m²
- Frame spacing: 2.40 m
- WEB frame spacing: 2.40 m
- Long. stiffener spacing: 0.61 m





Classification

Class society: DnV
Class notation: DnV 1A1
Barge for Deck Loading Class id. No.:
BB17: DnV id. 22756
BB18: DnV id. 22757

Tonnage

Deadweight (T = 4.00m): 5,191 tonnes
Gross tonnage: 2,318
Net tonnage: 695

Description

Ocean going, heavy deck cargo barge. Hull form and stern skeggs are specially designed to increase course stability and towing speed relatively to a conventional barge hull shape.

The pontoon is divided into 15 tanks and two forepeak tanks by means of two longitudinal and five transverse bulkheads.

Each tank is equipped with two manholes (both quick release type). The engine and pump room is located forward below the main deck and is accessible via hatches at the stem.

A transverse breakwater structure is located at main deck forward of frame one.

Ballasting

General

The barge is equipped with a ballast system with a total capacity of 570 m³/hour at 2 bar pressure. The ballast system is operated locally from the pump room.

Tanks

The ballast system consists of a total of 17 ballast tanks, all located in the pontoon. Each tank equipped with a separate ballast pipe running from the ballast system in the pump room.

Machinery Equipment

Generators

The barge is equipped with one Onan generator set, driven by a radiator cooled Cummins 6BT5.9-G2 and a Stamford Newage generator, supplying 90 kW.

Ballast Pump

1 x 570 m³/hour at 2 bar, electrically powered.

Mooring and Anchoring Equipment Winch

An electric dual purpose winch with an average pulling force of 10 tonnes is used for retrieving towing equipment. This winch is "locally operated" and mounted forward on a raised support structure. The winch also acts as an anchor windlass.

Anchor

A 1.6 tonnes stockless SPEC type anchor installed, positioned in the centre of the bow. The anchor is installed with an approximate four metres chain fore runner and a total wire length of approximate 200 m. The wire is of type Ø 35 mm.

Bollards

The barge is equipped with the following bollards:
- 4 double bollards, located one in each corner of the barge.
- 10 double post cleats, located 5 on each side at the deck edge.



Towing Equipment

Main towing equipment

Comprises:

1. Two smith brackets located at main deck level fwd, SB and Port side approx. 7 m from CL.
2. A chain towing bridle consisting of:
 - 2 x type 58 mm U3 chainlegs of approx. 20 m length each
 - 1 x triangular (delta) plate
 - 1 x type 58 mm U3 chain "pigtail" of approx. 9 m length
 - Complete with shackles and endlinksThe delta plate and bridle legs can be hoisted up at main deck level.

Emergency towing equipment

Comprises:

1. A smith bracket located at the main deck in CL fwd.
2. A chain of length approx. 6 m connecting the emergency towing wire to the smith bracket.
3. An emergency towing wire of length approx. 100 m, Ø 52 mm, secured to SB side of the barge, and with a spelter socket located at main deck aft.

Capacities

The towing equipment has a SWL of 67 tonnes. I.e. according to the typical class rules, tugs with a bollard pull up to 90 tonnes can be used without restrictions on the towing force.

Navigational Lights and Safety Equipment

Navigational lights are powered by the vessel's electrical system and by solar cells as set forth by governing laws within country of registry (flagging authority). Properly maintained and serviced safety equipment is always kept onboard.

Hull Strength

Rule section modulus
ZRule = 1,446,000 cm³
Actual section modulus
ZDeck = 3,179,000 cm³
ZBottom = 2,140,000 cm³

Design Loads

Deck loads

Distributed: 10 tonnes/m²
Local distributed: 20 tonnes/m²

Line loads

Transverse bulkheads: 60 tonnes/m
Transverse WEB girders: 49 tonnes/m
Transverse frames: 37 tonnes/m
Longitudinal bulkheads: 89 tonnes/m
Longitudinal girders: 74 tonnes/m

Point Loads

Trans bulkhead/Long bulkhead: 295 tonnes
Trans bulkhead/Long girder: 454 tonnes
Trans bulkhead/Sideshell: 318 tonnes
Trans frame/Long bulkhead: 170 tonnes
Trans frame/Long girder: 306 tonnes
Trans frame/Sideshell: 249 tonnes
Trans WEB girder/Long bulkhead: 238 tonnes
Trans WEB girder/Long girder: 283 tonnes
Trans WEB girder/Sideshell: 272 tonnes

Notes:

- 1) Numbers given are max. capacities (global loads, hydrostatic loads and dynamic loads).
- 2) When combining loads, the global bending and shear stresses have to be evaluated as well as the effect of the ballast distribution.
- 3) For required load distribution, local effects to be taken into consideration.