

# THE AMUNDSEN CLASS

THE MOST SOPHISTICATED  
AND ECO-FRIENDLY  
SHUTTLE TANKERS EVER BUILT

**Winner of the Clean Shipping Award 2009**

**Designed and built by Samsung Heavy Industries Co. Ltd**



**HN 1749 :: Amundsen Spirit :: delivery Q3 2010**

**HN 1750 :: Nansen Spirit :: delivery Q4 2010**

**HN 1827 :: Peary Spirit :: delivery Q2 2011**

**HN 1828 :: Scott Spirit :: delivery Q3 2011**

The Amundsen Class shuttle concept is an important step towards more sustainable off-shore loading logistics. Our guiding principles in the design and development process are:

- Enhanced Operational Performance
- Environmental Leadership
- Extended Fatigue Life and Structural Integrity

The main features of the Amundsen Class are on consumption and emissions, system redundancy, very robust DP capabilities and reduced probability of cracks in hull and deck structures.

### Principal Dimensions

Length, overall .....	250 m
Breath, moulded .....	43.8 m
Draft, design .....	14.25 m
Draft, scantling .....	15.0 m
Deadweight, scantling.....	108,700 tons
Service speed .....	14.6 knots
Cruising range .....	15,300 nm

### Capacities

Cargo tanks incl. slop tanks .....	121,700 m <sup>3</sup>
Slop tanks .....	2,450 m <sup>3</sup>
Fuel tanks .....	3,000 m <sup>3</sup>
Gas oil/diesel oil tanks .....	600 m <sup>3</sup>
Fresh water tanks .....	400 m <sup>3</sup>
Ballast tanks incl. peak tanks.....	42,600 m <sup>3</sup>
Accommodation .....	34 persons

### Rules, Regulations and Requirements

Rules, regulations and requirements of relevant authorities valid as of shipbuilding contract date.

- DnV Class
- NIS/NOR flag registry requirement
- StatoilHydro minimum technical requirement for shuttle tankers TR2211 Final Ver. 1, which includes BLS FMEA and HIL DP & PMS
- Offshore Loading Excellence (OLE) project initiatives

### Class Notations

DnV, Tanker of Oil ESP, CSR, PLUS-2, CSA-2, E0, DYNPOS-AUTR, RP, OPP-F, ICS, BOW LOADING, SBM, TMON, HELDK-SH, CCO, NAUT-AW, BIS, BWM-E, F-AMC, VCS-2, CLEAN DESIGN, COMF-V(3)-C(3), Green Passport

### First Class Equipment Manufacturers

Main- / auxiliary engines .....	MAN
Thrusters / propellers .....	Rolls Royce
Thermal oil heaters.....	Aalborg
Cargo / ballast pumps / IGS .....	Hamworthy
Electrical equipment .....	ABB
Navigation / Radio.....	Furuno
DP / ICMS / Cargo monitoring ...	Kongsberg
Bow loading system.....	APL
CCTV.....	Hernis

### Machinery

Main eng., MAN 6S50ME-C .....	2 x 7,020 kW
Aux. eng., MAN 8L27/38 .....	4 x 2,640 kW
El. Power .....	6.6 kV / 450 V
Main thermal oil heater .....	2 x 10,000 kW
Aux. thermal oil heater.....	1 x 1,250 kW
Economisers .....	2 x 625 kW

### Rudders and Thrusters

Main propeller, 4 blades .....	2 x 6,100 mm
Rudders, Shilling Monovec .....	2
Steering gear, vane type (VFD)...	2
Forw. tunnel thruster (VFD) .....	1 x 2,200 kW
Forw. azimuth thruster (VFD) ....	2 x 2,200 kW
Aft azimuth thruster (VFD) .....	1 x 2,200 kW

### Bow Loading System

North Sea type – capacity .....	9,000 m <sup>3</sup> /h
Traction winch .....	700 kN
Hose handling winch .....	400 kN
Service crane (knocke boom type)...	1 x 5 tons

### Cargo & Ballast Equipment

Cargo tanks / slop tanks .....	12 / 2
Segregation.....	2
Cargo pumps (VFD).....	4 x 3,000 m <sup>3</sup> /h
Vacuum stripping units.....	2
Cargo stripping pumps.....	2 x 240 m <sup>3</sup> /h
Cargo stripping eductors .....	2 x 500 m <sup>3</sup> /h
Inert gas generator.....	15,000 m <sup>3</sup> /h
Ballast pumps .....	2 x 2,500 m <sup>3</sup> /h
Ballast eductor.....	1 x 400 m <sup>3</sup> /h

### Navigation & DP

**Navigation** : 3 radars, 2 ECDIS, 3 gyros, adaptive autopilot, 2 DGPS, AIS, VDR, etc.  
**DP** : SDP 21, HiPAP 500, Artemis, 2 DARPS, Radius, Blom RPMS

### Environmental

- Protected locations of bunker tanks
- Clean Design with Green Passport
- IMO Tier 2 NOx compliance
- **Reduced VOC emission – KVOC, CVOC and increased cargo tank pressure (0.7 barg design)**
- Shipboard effluent control and treatment (SECAT) system
- Low Load Eco-DP mode
- Variable frequency drives (VFD) on major electrical equipment
- Prepared for cold climate operations