Boskalis

EQUIPMENT SHEET

BOKA TOPAZ
MULTI-ROLE DIVING SUPPORT VESSEL

CONSTRUCTION / CLASSIFICATION	
Vessel built by	Fosen Mekaniske Verksteder AS, Norway
Delivered	2007
Classification	DNV | ✠ 1A1 SF, COMF-V(3)C(3), HELDK-SH, EO DYNPOS-AUTR, CLEAN, DSV-SAT, DSV-SURFACE
Flag	Norway
Port of registry	Fosnavåg

MAIN DATA	
Gross tonnage	8,009 GT
Net tonnage	2,403 NT
Length overall	106.60 m
Beam	22.00 m
Depth	9.60 m
Draught	7.30 m
Deadweight	5,337 t

FEATURES
Saturation & air diving support
Structure installation
Flexible flowline & umbilical installation
Inspection, repair & maintenance
Well abandonment
Riser installation
Spoolpiece installation

ENGINE POWER & PROPULSION ENGINE POWER & PROPULSION	
Main engines: 4 x Wärtsilä 6L32B2 diesel engines (Marine gas oil, MGO)	Rated power each 2,880 kW@720 rpm each total: 11,520 kW NOx emissions value: 11.7 g/kWh MGO consumption@100% load: 186 g/kWh Coupled with 4x Marelli MJR 710 LB 10 Alternators each rated at 3,420 kVA
Harbour engine	Mitsubishi S12A2, 803 kW/1,800 rpm driving Newage Stamford HCM634K2, 963 kVA alternator
Emergency generator	Mitsubishi MHI S6Bk, 276 kW@1,800 rpm driving Stamford HCM434E1, 325 kVA alternator

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PROPULSION

Main Azimuth thrusters	2 x Wärtsilä type CS2510/2500 WN each rated at 3,000 kW
Retractable Azimuth thrusters	2 x Wärtsilä type CS1510-350/1530 MNR each rated at 2,200 kW
Tunnel thrusters (1 fwd & 1 aft)	2 x Wärtsilä type CT275Z-D each rated at 2,000 kW

DYNAMIC POSITIONING SYSTEMS

DP system	Kongsberg K-POS DP 31
DP classification	AUTR DP II
Reference systems	2 x DGPS, Kongsberg 200 & 132 2 x HIPAP, Kongsberg 500 2 x Light Taut wire; Bandak Mk2 1 x RadaScan, V115 1 x Cyscan AS

DP OPERATIONS

DSV operations with port and starboard moon pools and twin diving bells

ROV operations

Subsea installation works (manifolds, plets, plems etc.)

Spoolpiece tie ins

Umbilical and flexible flowline installation

Geotechnical and worksite survey

Module handling

Subsea crane operations

APPROXIMATE FUEL CONSUMPTIONS

Transit speed	24 m^3 / 24 h (11 knot - economical transit speed)
Full speed	36 m^3 / 24 h (12.5 kn - full speed)
DP rough	18 m^3 / 24 h
DP moderate	17 m^3 / 24 h
DP calm	16 m^3 / 24 h
Harbour	8 m^3 / 24 h (incl. main crane operations)

TANK CAPACITIES (100%)

Fuel oil	2,240 m^3
Ballast water	2,400 m^3
Anti rolling tank	4 x 843 m^3
Portable water	551 m^3
Lubricating oil	81 m^3

CARGO DECK

Deck area	860 m^2
Deck strength	5.0 - 10.0 t / m^2
Maximum deck load	~2,000 t depending on loading conditions and operations
Main moonpool	7.2 m x 7.2 m, situated on the centre line, main deck, 15.6 m aft from amidships

DECK CRANES

Main crane	Hydramarine crane, active heave compensated (AHC) 150 t (@10 m radius)
Auxiliary deck crane I	Dreggen crane 10 t (@1s8 m radius)
Auxiliary deck crane II	Provision crane 1.05 t (@14.7 m radius)

ROV SYSTEMS

Permanently installed garaged observation class ROV, Seaeye cougar, supplied with a Hydramec LARS system rated to 2000 m with 200 m of tether.
The system is based on the Saab Seaeye's iCON™ ecosystem which is an advanced distributed control and power distribution system that provides features such as advanced pilot aids and diagnostics to increase reliability and maintainability.
The system also carries a manip skid with dual hydrolek manipulators as standard. Control room is integrated into vessel adjacent to dive control and fully stocked stores room and workshop is located on the main deck adjacent to the ROV lars.

DIVE SYSTEM

Saturation System	Drägger 18 persons
Max. operating depth	300 m
Single lock main living chambers	2 x 6 persons living chambers (25.7 m^3)
Triple lock de-compression chamber	1 x 6 person living chamber (29.2 m^3)
Twin lock transfer chamber	21.5 m^3
SPHL evacuation system	1 x 18 person (10.5 m^3) Ocean wide hyperbaric lifeboat
Port bell	1 x 3 person (5.7 m^3)
Starboard bell	1 x 3 person (5.7 m^3)
Gas storage	23 x 2.0 m^3 & 23 x 2.4 m^3 tubes, (total capacity 20,240 m^3 @ 200 bar)
HP Gas transfer compressor	2 x Compair H 5437.1 HP Heliox compressors
LP air	1 x Boge SD40-2 screw compressor
HP air	1 x Bauer V5-HP V150-11-5 compressor

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Diver gas reclaim	2 x Divex gasmizer gas reclaim compressors
Air diving	1 x Air dive chamber, twin basket deployment skid
Dive moonpool	2 x Moonpool (port/starboard)
Dive system classified to:	DNV

COMMUNICATION SYSTEMS	
V Sat and Starlink with WiFi and LAN access points	
GMDSS area	A3

ACCOMMODATION	
Total	105 + 18 divers in SAT
Single cabins	20
Double cabins	39
4 Bed cabins	2
Hospital	1 + examination table
Messroom	Seats 66
Recreation room	TV lounge, seats 16
Recreation room	Internet lounge, seats 17, TV, 2 x internet workstations
Smokers lounge	TV, seats 12
Gymnasium	Equipped
Client office 1	4 x workstations
Client office 2	5 x workstations
Photo copier room	Photocopier, filing cabinets
Project office	6 x workstations, photocopier, survey desk
Ships office	2 x workstations
Offshore project managers office	Workstation
Field engineers office	Workstation
Heliport reception	Reception desk and seating area
Dive technicians office	3 x workstations
Conference room	Wall mounted TV connected to workstation with remote keyboard and mouse, seats 14
Dive control (port/starboard)	Dive control centre, dive coordinators office + 2 x workstations stbd/ ROV control port

SATURATION CONTROL	
Saturation control kitchen	Kitchen for diver's needs + washing machine and dryer
Dive technicians workshop	Bench, vice, pillar drill, compressed air, tools etc...
Engine room workshop	Bench, vice, pillar drill, lathe, bench grinder, compressed air, tools etc...

HELIDECK
Sikorsky S92
Maximum "D" value 20.88 m
Maximum take-off weight 12.8 te
DNV classed and complies with the requirements of CAA CAP437
Heli-beacon tele supply A.S., type TS-20B
Daylight only helideck operations
Topaz is a Category 3 for helideck operations

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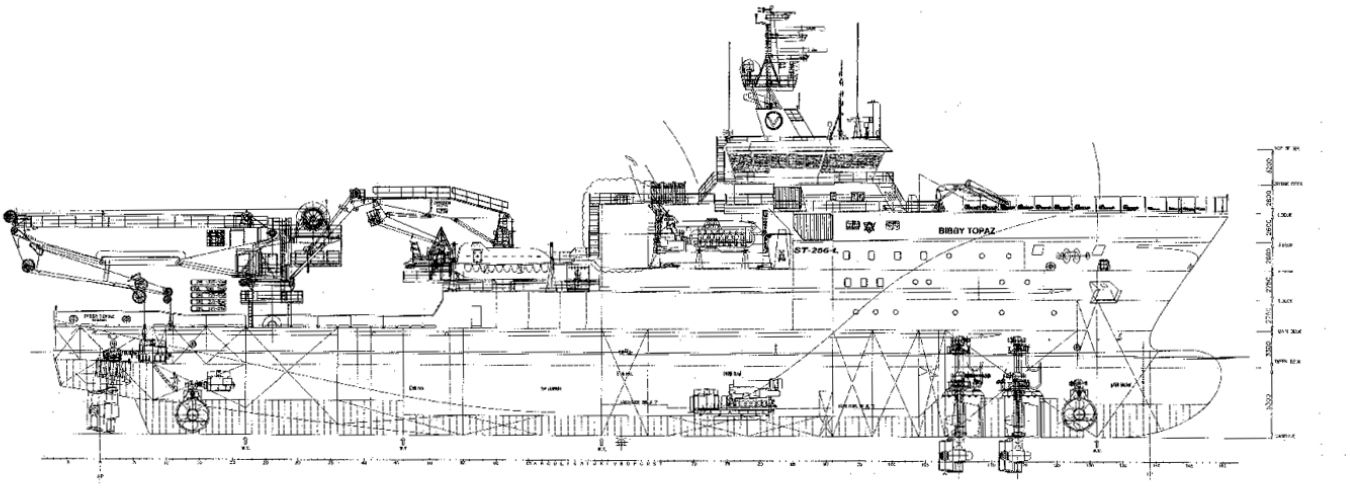
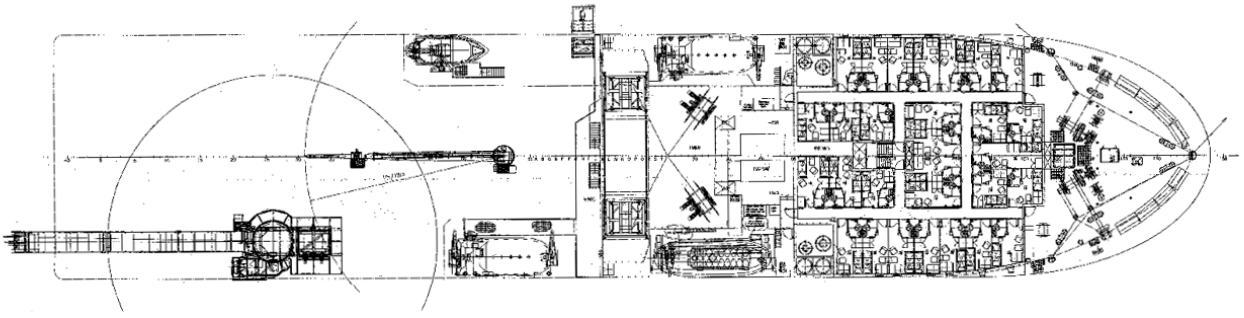


SIDE VIEW



TOP VIEW DECK LEVEL

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