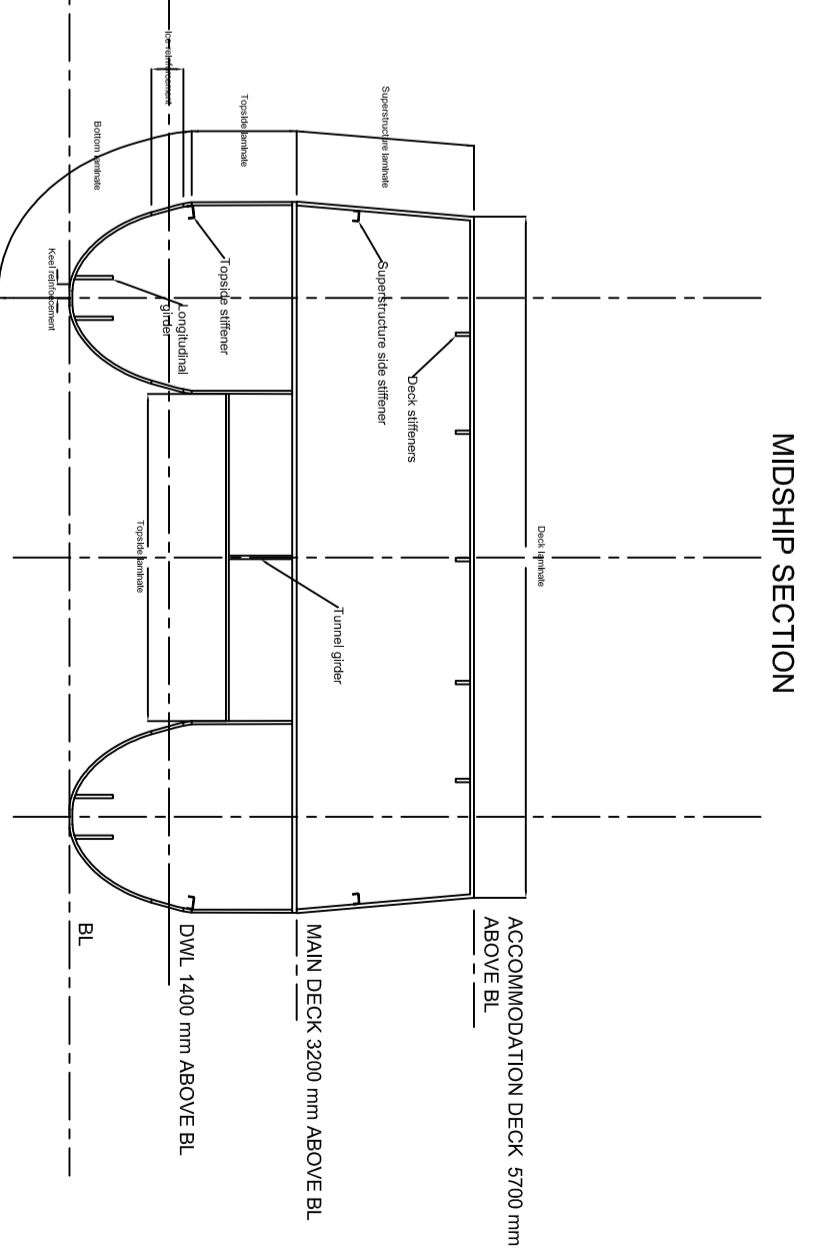
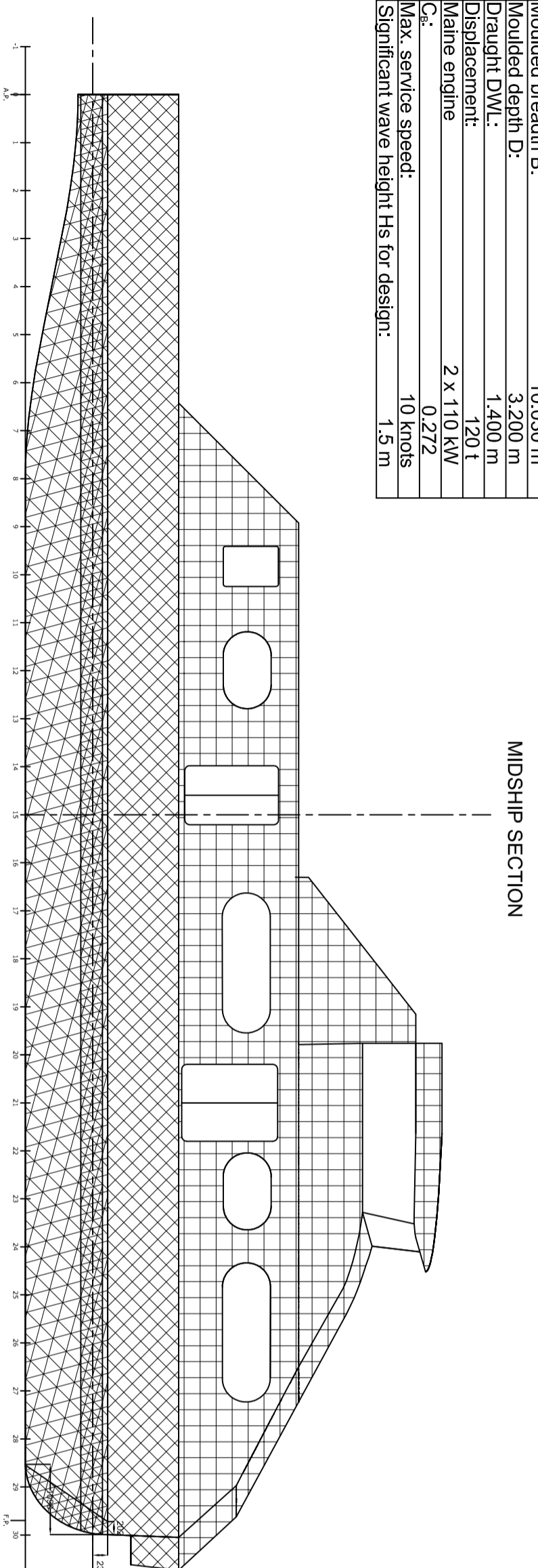


MAIN PARTICULARS:	
Length O.A.:	30.700 m
Length Lpp:	29.700 m
Moulded breadth B:	10.030 m
Moulded depth D:	3.200 m
Draught DWL:	1.400 m
Displacement:	120 t
Maine engine:	2 x 110 kW
C _r :	0.272
Max. service speed:	10 knots
Significant wave height H _s for design:	1.5 m



Laminate Code:	Bottom laminate:	Reinforcement in keel area:	Ice reinforcement:	Topside laminate:	Deck laminate:	Cargo deck laminate:	Superstructure side laminate:
OUTER SKIN:	1 x RE300 Woven E-Glass 0°/90° 1 x RC416 Woven Carbon 0°/90° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC500 Biaxial stitched Carbon 0°/90°	2 x WRE580 Woven E-Glass 0°/90°/600 mm stagger 20 mm 1 x RC416 Woven Carbon 0°/90° on the outside of outer skin 2 x UCHS 500 g/m² UNIDIRECTIONAL CARBON/400 mm @ 0°, stagger 20 mm and	1 x WRE580 Woven E-Glass 0°/90° 1 x RC416 Woven Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° Interleave with Bottom outer skin Stagger 20 mm	1 x RE300 Woven E-Glass 0°/90° 1 x RC416 Woven Carbon 0°/90° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x RE300 Woven E-Glass 0°/90° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	5 mm Aluminium 1 x RE300 Woven E-Glass 0°/90° 1 x RC416 Woven Carbon 0°/90° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x RE300 Woven E-Glass 0°/90° 1 x RC416 Woven Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°
CORE:	Divynzell H100 40 mm Core	Keel reinforcement	Divynzell H200 40 mm Core	Divynzell H60 40 mm Core	Divynzell H100 60 mm Core	Divynzell H130 60 mm Core	Divynzell H60 60 mm Core
INNER SKIN:	1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°		1 x BC400 Biaxial stitched Carbon 0°/90°	1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°
OUTER BONDING:	1 x RE300 Woven E-Glass 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°		1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90°
INNER BONDING:	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45°		1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45°	1 x XC411 Biaxial stitched Carbon +4/45° 1 x BC400 Biaxial stitched Carbon 0°/90° 1 x XC411 Biaxial stitched Carbon +4/45°

MATERIAL CODE AND PROPERTIES

Core material	Thickness [mm]	Average density [kg/m³]	Longitudinal Shear strength [MPa]	Longitudinal Modulus [MPa]	Transverse Shear strength [MPa]	Transverse Modulus [MPa]	Compressive Modulus [MPa]
Divynzell H80	80	0.90	0.90	23	0.90	23	65
Divynzell H100	100	1.20	1.20	30	1.20	30	95
Divynzell H130	130	1.70	1.70	40	1.70	40	130
Divynzell H200	200	2.80	2.80	70	2.80	70	235

Fibre material	Volume fraction	Cured ply thickness [mm]	Cured ply weight [g/m²]	Longitudinal tensile modulus [MPa]	Transverse tensile modulus [MPa]	Longitudinal compressive modulus [MPa]	Transverse compressive modulus [MPa]	In-Plane Shear Modulus [MPa]	In-Plane Shear modulus [MPa]	Longitudinal Interlaminar shear modulus [MPa]	Longitudinal tensile strain [%]	Transverse tensile strain [%]	Longitudinal compressive strain [%]	Transverse compressive strain [%]	In-Plane Shear Strain [%]
RE300, 0°/90° Woven fabric	0.44	0.262	462	19960	19960	107540	6350	3201	2910	3390	1.50%	1.50%	-1.20%	-1.20%	1.41%
UCHS500, 0° Unidirectional	0.48	0.579	835	112110	6350	107540	6350	3390	3390	3390	1.00%	0.45%	-0.67%	-1.50%	1.20%
XC411, +4/45° Biaxial stitched fabric	0.46	0.995	727	11600	11600	11600	11600	27110	27110	27110	0.96%	0.96%	-0.67%	-0.67%	0.91%
XC601, +4/45° Biaxial stitched fabric	0.46	0.727	1048	11600	11600	11600	11600	27110	27110	27110	0.96%	0.96%	-0.67%	-0.67%	0.91%
BC400, 0°/90° Biaxial stitched fabric	0.46	0.495	727	56800	56800	56800	56800	3220	3220	3220	0.95%	0.95%	-0.68%	-0.68%	1.49%
BC600, 0°/90° Biaxial stitched fabric	0.46	0.727	1048	56800	56800	56800	56800	3220	3220	3220	0.95%	0.95%	-0.68%	-0.68%	1.49%
RC416, 0°/90° Woven fabric	0.45	0.514	728	54490	54490	54490	54490	3465	3465	3150	0.95%	0.95%	-0.68%	-0.68%	1.36%
WRE580, 0°/90° Woven fabric	0.45	0.496	881	20380	20380	20380	20380	3278	2980	2980	1.50%	1.50%	-1.25%	-1.25%	1.37%

CLASSIFICATION : DET NORSKE VERITAS * 1A1, LC, E0
REGISTRATION : EU, NATIONAL TRADE, AREA D
2012-09-12 ER ventilation, bridge deck

DATE DESCRIPTION

P-REVIEW SIGN

DESIGN-REVIEW SIGN

DRAWING SIZE: A2

SCALE: 1:80

PROJECT: ØKO-Ø FERGE

TITLE: HULL LAMINATE AND CORE

DRAWING NUMBER: 050-091-0101-005-000

ØKO-Ø