

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	Final Documentation - Frontpage

Final Documentation Constructor MSW3000



Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	Final Documentation Index

Final Documentation Index

Sect.	Nr/No	Beskrivelse/Description
1		Quality Control Plan
2		Certificates of Conformity
3		Certificate of Compliance
4		Material Certificate
5		Dimensional/Weight Control Report
6		Surface Preparation and Coating Report

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	

Sect. no: 1

Quality Control Plan

Control Plan

Project number:	50347 nr 1 av 2	PO-number:	14282
Customer:	Kystdesign AS		
Product:	Buoyancy Constructor LD3000		
Compiled by:	Truls Reigstad	Rev:	No of sheets: 2

A	13.06.2014	Issue for comments	TR	AL	13.06.14 / TR
Rev.	Date	Description	Made by	Checked	Approved Date/sign

Control Plan

Project number:	50347 nr 1 av 2	PO-number:	14282
Customer:	Kystdesign AS		
Product:	Buoyancy Constructor LD3000		
Compiled by:	Truls Reigstad	Rev:	1
		No of sheets:	2

Control number	Description	Activity	Criteria	Verification Document	Mundal Subsea	Customer	Completed Date	Sign
1	Structure	Contract Review	Drawings and specifications	Drawings and specifications	I/R	R	13.06.2014	VAA
2	Structure	Purchase	PO and specifications	Drawings and specifications	I/R	R	13.06.2014	VAA
3	Materials	Materialspec	Drawings and specifications	Drawings and specifications	I/R	R	13.06.2014	VAA
4	Material certification	Material cerification, traceability and CoC	Specifications	Traceability List and CoC	R	M	30.10.2014	RAA
5	Dimensjonal Control	Dimensional Control (before painting)	Drawings	Checklist/form	R	M	23.12.2014	RAA
6	Surface treatment	Surface treatment	Procedures	Checklist/form	R	M	17.01.2015	RAA
7	Delivery	Packaging and shipping	Own standard	Visual inspection and checklist	R	M	19.01.2015	RAA

I = Issue **R** = Review **W** = Witness point **H** = Hold point **M** = Customer can monitor activity/documentation at supplier/manufacture

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	

Sect. no: 2

Certificates of Conformity

 117 rue d'Ollioules Parc d'activités La Millonne 83140 SIX FOURS France Phone : 33 (0) 494 870 777 Fax : 33 (0) 494 940 571 Website : www.bmti-alcen.com E-mail : bmti@bmti-alcen.com		N° de la Déclaration 2024/2014 <i>Statement N°</i>			
Client <i>Customer</i> DIAB AS LEANGBUKTA 40 N-1392 VETTRE NORWAY		Nombre de pages 1 <i>Number of pages</i>			
N° de la commande ou du marché : Order or contract N° 64590		DECLARATION DE CONFORMITE (NF L 00-015 C) STATEMENT OF CONFORMITY (NF L 00-015 C)			
N° et date du bordereau de livraison : 12068 du 25/08/14 Number and date of delivery note :					
Désignation <i>Designation</i>	Référence ou type <i>Reference or type</i>	Quantité <i>Quantity</i>	N° de série ou de lot <i>Serial or batch number</i>	Autres renseignements <i>Further informations</i>	
Syntactic foam block : Standard Block 950x400x125	LD3000	178	CI 2026	Average density on the batch : 460 Kg/m ³ DWG N° : 950x400x125/A	
<p>Nous déclarons que la fourniture citée est conforme aux exigences du contrat et que, après vérifications et essais, elle répond en tout point, aux exigences spécifiées, aux normes et règlements applicables, sauf exceptions, réserves ou dérogations énumérées dans la présente déclaration de conformité : <i>We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after complétion of testing and verification, they completely satisfy all specified requirements, and applicable standards and regulations :</i></p> <p>Renseignements particuliers aux fournitures livrées : Indiquer notamment la référence des dérogations accordées <i>Information particular to the supplies delivered : Specify the reference of concessions garanted</i></p>					
VISAS – SIGNATURES					
Contrôle BMTI <i>BMTI's Inspection</i> Nom et Fonction : Christophe REUFF - Controller <i>Name and Function</i>  Date : 08/08/2014 Signature		Eventuellement visa du SERVICE DE SURVEILLANCE <i>If required, signature and date of INSPECTION AUTHORITY</i> Nom et Fonction <i>Name and Function</i> Date : Signature			

		117 rue d'Ollioules Parc d'activités La Millonne 83140 SIX FOURS France Phone : 33 (0) 494 870 777 Fax : 33 (0) 494 940 571 Website : www.bmti-alcen.com E-mail : bmti@bmti-alcen.com		N° de la Déclaration Statement N°		2023/2014			
Client Customer		DIAB AS LEANGBUKTA 40 N-1392 VETTRE NORWAY		Nombre de pages		1 <i>Number of pages</i>			
N° de la commande ou du marché : Order or contract N° 64590				DECLARATION DE CONFORMITE (NF L 00-015 C) STATEMENT OF CONFORMITY (NF L 00-015 C)					
N° et date du bordereau de livraison : 12062 du 08/08/14 Number and date of delivery note :									
Désignation <i>Designation</i>		Référence ou type <i>Reference or type</i>		Quantité <i>Quantity</i>		N° de série ou de lot <i>Serial or batch number</i>		Autres renseignements <i>Further informations</i>	
Syntactic foam block : Standard Block 950x400x125		LD3000		4		CI 2026		Average density on the batch : 450 Kg/m³ DWG N° : 950x400x125/A	
<p> Nous déclarons que la fourniture citée est conforme aux exigences du contrat et que, après vérifications et essais, elle répond en tout point, aux exigences spécifiées, aux normes et règlements applicables, sauf exceptions, réserves ou dérogations énumérées dans la présente déclaration de conformité : <i>We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards and regulations :</i> </p> <p> Renseignements particuliers aux fournitures livrées : Indiquer notamment la référence des dérogations accordées <i>Information particular to the supplies delivered :</i> <i>Specify the reference of concessions granted</i> </p>									
VISAS – SIGNATURES									
Contrôle BMTI <i>BMTI's Inspection</i> Nom et Fonction : Christophe REUFF - Controller <i>Name and Function</i> Date : 08/08/2014					Eventuellement visa du SERVICE DE SURVEILLANCE <i>If required, signature and date of INSPECTION AUTHORITY</i> Nom et Fonction <i>Name and Function</i> Date :				
Signature 					Signature				

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	

Sect. no: 3

Certificates of Compliance

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	Certificate of Compliance

Certificate of Compliance

Mundal Subsea hereby confirms that the equipment listed below has been produced in accordance with the purchase order listed above, meeting all of its provisions and requirements.

Product	Drawing nr	Unit		Batch number list
Constructor Buoyancy MSW3000	AF25-1011M11_rev02	1 of 2		1-5

Signed on behalf of Mundal Subsea by
Position: Administration Manager
Name: Truls Reigstad

Signature: *Truls Reigstad*

Place/Date: Radøy 26.01.2015

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	

Sect. no: 4

Material Certificate

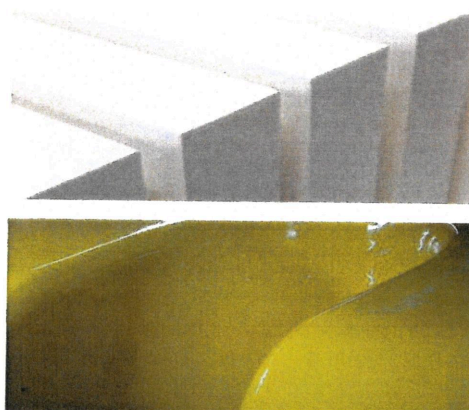
LD3000

Pure Syntactic Foam Deep water buoyancy material

Low density grade for offshore, oceanography and military applications in water depths up to 3 000 m.
Composition: Epoxy matrix and glass microspheres.

Benefits:

- Low water absorption.
- Low density buoyancy material.
- LD3000 can be easily machined and drilled.
- Epoxy bonding allows building of finished buoyancy modules



Technical Data

Average density per block	450 kg/m ³ (+/- 40)	
Average density on a 1m ³ batch	450 kg/m ³ (+/- 15)	
Depth rating (At 10°C)	3000m	
Hydrostatic crush pressure (Instantaneous, 2°C) (typical)	370 bars	
Safety factor (typical)	1.23	
Block dimensions (L (+/-5) x W (+/-2) x H (+/-1))	950 x 400 x 125 mm	1200 x 600 x 125 mm
Block volume (typical)	47.5 liters	90 liters
Buoyancy per block in seawater (typical)	27.3 kg	51.8 kg
Compressive strength (Standard : NFT 56-101/A1)	31.5 MPa	
Compressive modulus (Standard : NFT 56-101/A1)	1.8 GPa	
Flexural strength (Standard : NF en ISO 178)	19.4 MPa	
Flexural modulus (Standard : NF en ISO 178)	1.27 GPa	
Tensile strength (Standard : NFT 56-103)	11.7 MPa	
Tensile modulus (Tensile standard : NFT 56-103)	1.57 GPa	
Glass transition (DSC) (Tg standard : NF en ISO 11 357)	85-95 °C	

Typical mechanical properties done at 20°C

Water ingress < 3%, test done at service pressure, at 10°C, during 9 days, cylinders (Diam 25mm, Height 25mm) with large surface/volume ratio: 0.24 mm⁻¹

This document is presented in good faith, corresponding to average results and is not to be considered as specification.

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	

Sect. no: 5

Dimensional/Weight Control Report

VEKTKONTROLL / WEIHT CONTROL

Prosjekt / Project no.	50347	Ordre / Order no.	14282
Tegningsnr. / Drawing no.	AF25-1011M11		
Revisjon nr. / Revision no.	2		

As built weight	Serie nr 50347-1	1536	Kg
As built weight	Serie nr 50347-2		Kg
As built weight			Kg
As built weight			Kg

KONTROLLMÅL UTFØRT AV / CHECK MEASUREMENT PERFORMED BY:

Navn / Name	<u>Reidar Aarsjov</u>	Dato / Date	<u>19/1-15</u>
-------------	-----------------------	-------------	----------------

Mundal Gruppen

Mundal Båt as

Mundal Subsea as

Mundal Marin

Radøyvegen 387 - 5938 Sæbøvagen

Prosjekt/Project no	50347 nr 1 av 2	Ordre/PO	14282
Kunde/Customer	Kystdesign AS	Dokument/Document	

Sect. no: 6

Surface Preparation and Coating Report

Surface preparation and coating report

Prosjekt / Project no.	50347	Ordre / Order no.	14282
Tegningsnr. / Drawing no.	AF25-1011M11		
Revisjon nr. / Revision no.	2		

Surface: Remove all burs and dust before start of priming.

Description	Product	Color RAL	Date	Time and deg C
Start time primer Puracoat	Araldite	NA	15/1-15	16 ⁰⁰ - 20°C
Start time painting Puracoat		RAL 1004	16/1-15	10 ³⁰ - 20°C
Start time painting base coat and top coat	Jotun Hardtop XP	Basecoat: RAL 9002	17/1-15	09 ³⁰ - 20°C
		Topcoat: RAL 1003		
Sign: Reidar Aaryn				

Mundal Gruppen

Mundal Båt as

Mundal Subsea as

Mundal Marin

Radøyvegen 387 - 5938 Sæbøvagen