PROGETTO PER LA REALIZZAZIONE DI UN IMPIANTO PER LA PRODUZIONE DI ENERGIA MEDIANTE LO SFRUTTAMENTO DEL VENTO NEL MARE ADRIATICO MERIDIONALE - BARIUM BAY
74 WTG – 1.110 MW

PROGETTO DEFINITIVO - SIA

Progettazione e SIA

Indagini ambientali e studi specialistici

Studio misure di mitigazione e compensazione

supervisione scientifica

3. STRUTTURE DI FONDAZIONE AEROGENERATORI

R.3.1 Schede tecniche delle linee di ormeggio

REV.	DATA	DESCRIZIONE
00	03/24	integrazioni MASE

Firmato digitalmente da:
FRANCESCO DOLZANI
Data: 18/03/2024 17:01:16

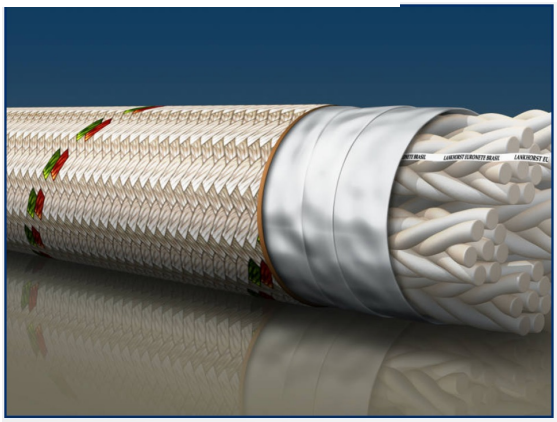
Firmato digitalmente da:
Faccapelo Fabio
Firmato il 19/03/2024 17:44
Seriale Certificato: 1630330
Valido dal 18/07/2022 al 18/07/2025
InfoCamere Qualified Electronic Signature CA

Studlink Chain – Offshore Grades

Cortland offers offshore grade chain and fittings from R3 - R5.

Dia. (mm)	Grade R3		Grade R3S		Grade R4		Weight (kg/m)
	Proof Load (tonnes)	MBL (tonnes)	Proof Load (tonnes)	MBL (tonnes)	Proof Load (tonnes)	MBL (tonnes)	
50	150.87	227.32	183.49	253.82	220.18	279.31	54.75
52	162.49	244.85	197.66	273.39	237.21	300.92	59.22
54	174.52	263.00	212.33	293.68	254.74	323.14	63.86
56	186.95	281.75	227.42	314.58	272.88	346.18	68.68
58	199.80	301.02	242.92	336.09	291.54	369.83	73.67
60	212.95	320.80	258.92	358.21	310.70	394.19	78.84
62	226.40	341.18	275.33	380.94	330.48	419.16	84.18
64	240.27	361.98	292.25	404.18	350.66	444.85	89.70
66	254.43	383.38	309.48	428.13	371.36	471.05	95.40
68	269.01	405.30	327.12	452.60	392.56	497.96	101.27
70	283.89	427.73	345.26	477.57	414.27	525.59	107.31
73	306.83	462.28	373.09	516.21	447.71	567.99	116.71
76	330.48	497.86	401.83	555.96	482.26	611.72	126.49
78	346.59	522.22	421.51	585.08	505.81	641.69	133.24
81	371.36	559.63	451.68	624.87	542.00	687.56	143.69
84	396.84	597.96	482.67	667.69	579.20	734.76	154.53
87	422.94	637.31	514.37	711.62	617.33	783.08	165.76
90	449.75	677.57	546.89	756.57	656.37	832.52	177.39
92	467.89	704.99	569.01	787.16	682.87	866.16	185.36
95	495.62	746.79	602.75	833.84	723.34	917.53	197.65
97	514.48	775.13	625.69	865.44	750.76	952.40	206.06
100	543.12	818.35	660.55	913.76	792.66	1005.50	219.00
102	562.59	847.60	684.20	946.48	821.00	1041.49	227.85
105	592.15	892.25	720.18	996.23	864.22	1096.23	241.45
107	612.13	922.32	744.55	1029.87	893.37	1133.33	250.73
111	652.80	983.69	793.99	1098.37	952.80	1208.56	269.83
114	683.89	1030.48	831.70	1150.56	998.06	1266.06	284.61
117	715.39	1077.88	870.03	1203.57	1044.04	1324.46	299.79
120	747.30	1126.10	908.87	1257.29	1090.72	1383.59	315.36
122	768.81	1158.51	935.07	1293.58	1122.12	1423.45	325.96
124	790.52	1191.23	961.47	1330.07	1153.82	1463.61	336.73
127	823.45	1240.67	1001.43	1385.42	1201.73	1524.46	353.23
130	856.68	1290.83	1041.90	1441.28	1250.25	1586.03	370.11
132	879.00	1324.46	1069.11	1478.90	1282.87	1627.42	381.59
137	935.58	1409.68	1137.82	1574.01	1365.44	1732.11	411.04
142	992.97	1496.13	1207.65	1670.54	1449.13	1838.23	441.59
147	1051.07	1583.69	1278.29	1768.30	1533.94	1945.87	473.24
152	1109.79	1672.27	1349.75	1867.18	1619.78	2054.64	505.98
157	1169.11	1761.67	1421.92	1967.07	1706.32	2164.53	539.81
162	1228.95	1851.78	1494.70	2067.69	1793.68	2275.23	574.74
167	1289.19	1942.51	1567.89	2169.01	1881.55	2386.75	610.77
172	1349.64	2033.64	1641.49	2270.74	1969.83	2498.78	647.89
177	1410.40	2125.08	1715.29	2372.88	2058.41	2611.11	686.11

CABRAL 512®



DO YOU HAVE ANY QUESTIONS? CONTACT US FOR MORE INFORMATION

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CABRAL 512® polyester ropes are manufactured from high effi ciency sub-rope cores laid parallel within an outer braided jacket. Each sub-rope is monitored during rope manufacture to ensure all sub-ropes have equal tension and length. Typically, CABRAL 512® ropes include 7 to 18 sub-ropes, each sub-rope being of a long lay length 12 x 1 construction, which gives a 100% torque free rope.

The design of this mooring rope consists of parallel laid yarns to construct the strands of the sub-rope cores which are also laid parallel within an outer braided jacket. Again, each sub-rope is of a long lay length 12 x 1 construction, which gives a 100% torque free rope.

Axial Stiffness

Stiffness is normally divided into two categories: *static stiffness* and *dynamic stiffness*. Static stiffness is used to determine the extension of the rope from first order motions and calculate the offset of the vessel. Dynamic stiffness is used to calculate the peak loads in the mooring lines during second order motions of the vessel. CABRAL 512® is the stiffest rope construction currently available in the market for deepwater mooring applications. It requires less constructional extension due to bedding in and lower overall elastic extension resulting in smaller platform offsets and the option to utilise lower pre-tensioning during installation. In order to maximise the efficiency of the mooring system, Lankhorst recommends performing a stiffness test at an early stage. This stiffness test should incorporate static and dynamic loading scenarios and is performed on a sub-rope. Lankhorst can offer this service to our clients, please ask for further details.

MBS		diameter	mass in air	mass in water
mt	kN	mm	kg/m	kg/m
450	4,413	117	9.1	2.3
500	4,903	123	10.0	2.6
600	5,884	133	12.1	3.1
700	6,865	143	14.1	3.6
800	7,845	152	16.3	4.2
900	8,826	160	18.2	4.7
1,000	9,807	168	20.1	5.2
1,100	10,787	175	22.2	5.7
1,200	11,768	183	24.1	6.2
1,250	12,258	186	25.2	6.5
1,300	12,749	190	26.1	6.7
1,400	13,729	196	27.9	7.2
1,500	14,710	203	29.8	7.7
1,600	15,691	209	32.0	8.2
1,700	16,671	215	34.0	8.7
1,800	17,652	221	35.8	9.2
1,900	18,633	226	37.7	9.7
2,000	19,613	236	39.5	10.2
2,100	20,594	241	41.5	10.7
2,200	21,575	248	43.7	11.2
2,300	22,555	253	45.5	11.7
2,400	23,536	258	47.1	12.1
2,500	24,517	263	49.0	12.6

* Mass in Air is measured with the rope under a tension of 1% MBS