

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Cleats**

with type designation(s)
Cable Cleat

Issued to

Ningbo Zhenhai Non-ferrous Metal Rolling Factory
Ningbo, Zhejiang province, China

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Material **Metallic**
Suitable for open deck **Yes**

Issued at **Hamburg** on **2018-10-16**

This Certificate is valid until **2023-10-15**.

for **DNV GL**

DNV GL local station: **Ningbo**

Approval Engineer: **Carsten Hunsalz**

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Arne Schaarmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Classification	According to IEC 61914
6.1 Material	Stainless steel 316L
6.2 Max and min	-60 to +120°C
6.3 Resistance to impact	Very Heavy
6.4 Resistance to electromechanical forces	Lateral and axial retention, withstanding more than one short circuit.
6.5.1 Resistance to UV	No cracks or damage
6.5.2 Resistance to	Complied to IEC 61914 item 11.2.2

No	Part. No.	Cable diameter (mm)	Dimensions (mm)*		
1	STCC-V1723	Φ17-23	53	74	66
2	STCC-V1925	Φ19-25	57	77	70
3	STCC-V2329	Φ23-29	64	81	78
4	STCC-V2531	Φ25-31	67	84	81
5	STCC-V2733	Φ27-33	69	86	83
6	STCC-V2935	Φ29-35	75	90	89
6	STCC-V3238	Φ32-38	81	94	95
8	STCC-V3541	Φ35-41	87	98	100
9	STCC-V3844	Φ38-44	90	101	104
10	STCC-V4248	Φ42-48	98	105	111
11	STCC-V4551	Φ45-51	104	109	117
12	STCC-V4753	Φ47-53	108	111	120
13	STCC-V4955	Φ49-55	111	114	124
14	STCC-V5157	Φ51-57	115	116	127
15	STCC-V5359	Φ53-59	119	119	133
16	STCC-V5561	Φ55-61	123	124	137
17	STCC-V5763	Φ57-63	126	126	140
18	STCC-V5965	Φ59-65	130	128	144
19	STCC-V6167	Φ61-67	135	132	147
20	STCC-V6369	Φ63-69	139	136	150
21	STCC-V6571	Φ65-71	142	140	153
22	STCC-V6773	Φ67-73	146	143	156
23	STCC-V6975	Φ69-75	150	147	160
24	STCC-V7177	Φ71-77	153	151	163
25	STCC-V7379	Φ73-79	157	154	166
26	STCC-V7581	Φ75-81	161	158	169
27	STCC-V7783	Φ77-83	165	161	173
28	STCC-V7985	Φ79-85	168	164	176
29	STCC-V8187	Φ81-87	172	169	179
30	STCC-V8389	Φ83-89	176	173	182
31	STCC-V8692	Φ86-92	181	177	187
32	STCC-V8896	Φ88-96	189	181	192
33	STCC-V9199	Φ91-99	195	185	196
34	STCC-V96103	Φ96-103	202	190	201
35	STCC-V99107	Φ99-107	210	194	202
36	STCC-V103111	Φ103-111	217	199	204

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37	STCC-V107115	Φ107-116	225	203	208
38	STCC-V111119	Φ111-119	232	208	213
39	STCC-V115123	Φ115-123	240	213	217
40	STCC-V119129	Φ119-129	249	217	221
1	STCC-S2832	Φ28-32	-	60	56
2	STCC-S3034	Φ30-34	-	62	58
3	STCC-S3236	Φ32-36	-	64	60
4	STCC-S3438	Φ34-38	-	66	62
5	STCC-S3640	Φ36-40	-	70	64
6	STCC-S3842	Φ38-42	-	68	66
7	STCC-S4044	Φ40-44	-	70	68
8	STCC-S4246	Φ42-46	-	71	70
9	STCC-S4448	Φ44-48	-	73	72
10	STCC-S4650	Φ46-50	-	74	74
11	STCC-S4852	Φ48-52	-	76	76
12	STCC-S5054	Φ50-54	-	78	78
13	STCC-S5256	Φ52-56	-	79	80
14	STCC-S5458	Φ54-58	-	80	82
15	STCC-S5660	Φ56-60	-	82	84
16	STCC-S5862	Φ58-62	-	84	86
17	STCC-S6064	Φ60-64	-	85	88
18	STCC-S6266	Φ62-66	-	87	90
19	STCC-S6468	Φ64-68	-	89	92
20	STCC-S6670	Φ66-70	-	90	94
21	STCC-S6872	Φ68-72	-	92	96
22	STCC-S7074	Φ70-74	-	94	98
23	STCC-S7276	Φ72-76	-	96	100
24	STCC-S7478	Φ74-78	-	98	102
25	STCC-S7680	Φ76-80	-	100	104
26	STCC-S7882	Φ78-82	-	102	106
27	STCC-S8084	Φ80-84	-	104	108
28	STCC-S8286	Φ82-86	-	106	110
29	STCC-S8488	Φ84-88	-	108	112
30	STCC-S8690	Φ86-90	-	109	114
31	STCC-S8892	Φ88-92	-	112	118
32	STCC-S9094	Φ90-94	-	115	121
33	STCC-S9296	Φ92-96	-	125	128
34	STCC-S94106	Φ94-106	-	134	134
35	STCC-S100112	Φ100-112	-	139	140
36	STCC-S106118	Φ106-118	-	144	146
37	STCC-S112124	Φ112-124	-	152	156
38	STCC-S118130	Φ118-130	-	161	166
39	STCC-S127139	Φ127-139	-	160	168
40	STCC-S132144	Φ132-144	-	164	174
41	STCC-S138150	Φ138-150	-	169	180

* For detailed information wrt. dimension, please see manufacturer drawing

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Ipk	Cleat distances
≤ 230 kA	0.3 m
≤ 180 kA	0.6 m
≤ 100 kA	1.2 m

For cleat distances between 100 kA and 230 kA see manufacturer calculation.

Application/Limitation

To be installed in accordance with the manufacturer`s instructions and DNV GL rules.

For fixing single core AC current cables on board Mobile Offshore Units and Ships then each cable cleat shall include all phases.

Type Approval documentation

Tests carried out

Type tests according to IEC 61914:2015

Marking of product

Manufacturer name - Type designation - product identification

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer`s product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE