

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Lifting set for Offshore containers and Portable Offshore Units

with type designation(s)

Master Link Serie F

Intermediate Link Serie M

Master Link Assembly Serie FM

Issued to

KITO CHAIN ITALIA SRL

Tarvisio UD, Italy

is found to comply with

DNV 2.7-1 Offshore Containers (2013)

EN 12079-2 Offshore containers and associated lifting sets – Part 2: Lifting sets Design, manufacture and marking

IMO/MSC Circular 860

EN 1677-4 Components for slings – Safety – Part 4: Links, Grade 8

DNV Standard for Certification No. 2.7-3 Portable Offshore Units (2011)

Application :

Grade 8 Links for Lifting Sets for Offshore Containers and Portable Offshore Units

This Certificate is valid until **2018-06-30**.

Issued at **Høvik** on **2016-03-31**

for **DNV GL**

DNV GL local station: **Venice**

Approval Engineer: **Igor Antonijevic**

Inger-Helene Hals
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

Links for use in Lifting Sets for Offshore Containers certified to DNV 2.7-1 Offshore Containers or Portable Offshore Units certified according to DNV 2.7-3 Portable Offshore Units.

Detailed product information and range of certified products covered by this Type Approval are listed in Appendix 1 of this Type Approval Certificate.

Application/Limitation

Selection of the correct dimensions of Lifting Set Components shall be according to requirements for lifting sets of offshore containers as given in DNV 2.7-1 Offshore Containers, Chapter 8. The necessary Working Load Limit (WLL) for a given container rating should be determined according to Table 8-1 in the above mentioned Chapter. In no case should the WLL of Lifting Sets for Offshore Containers be less than 7.0 tonnes.

Tests to be carried out:

- Production testing: According to DNV Standard for Certification No. 2.7-1 and EN standard EN 1677-4 "Components for slings Safety - Part 4; Links, Grade 8" in agreement with the DNV GL surveyor.
- Material to be impact tested by Charpy impact method according to DNV 2.7-1 Offshore Containers, Chapter 8.4.

The manufacturer shall issue product certificates according to Sec. 8.5 in DNV 2.7-1, using the certificate form UCQ.08.02.13.MOD rev.2. This certificate form is only to be used for links certified according to this Type Approval.

For slings manufactured according to DNV 2.7-3 Portable Offshore Units

Prior to selection of links the minimum required working load limit (WLL) shall be decided according to the strength requirements for lifting sets on portable offshore units as given in DNV 2.7-3, Chapter 7.3.5. Resulting sling force (RSF) can be found in the Design Verification Report (DVR) issued by DNV for the Portable Offshore Unit.


Type Approval documentation

Drawing No.	Rev.	
86074-2010-AQ-ITA-SINCERT		Quality Management Certificate - ISO 9001:2008 – By DNV
UCQ.08.02.13.MOD	2	weissenfels tech-chains
Page 1 of 5	1	Offshore Lifting Set Components – Links- Grade 8 Master Link serie F
Page 2 of 5	1	Offshore Lifting Set Components –Links- Grade 8 Intermediate Link serie M
Page 3 of 5	1	Offshore Lifting Set Components –Links- Grade 8 Master Link Assembly (Quad Assembly) serie FM
Page 4 of 5	1	Offshore Lifting Set Components – Manufacturing Procedure
Page 5 of 5	1	Offshore Lifting Set Components – Testing Procedure
Page 1 of 1	0	Production, laboratory and testing – facilities (Offshore lifting set components –Links-)

In addition the following documentation is used as information for the Type Approval:

Type Approval Assessment Report endorsed by DNV Venice, dated 2013-06-04

Test report: 08/OF/2012, 01/OF/2013, 11/OF/2012, 16/OF/2012, 06/OF/2013, 04/OF/2012, 17/OF/2012, 02/OF/2013, 07/OF/2012, 18/OF/2012, 10/OF/2012, 12/OF/2012, 07/OF/2013, 03/OF/2012, 01/OF/2012, 05/OF/2013, 02/OF/2012, 13/OF/2012, 19/OF/2012, 06/OF/2012, 09/OF/2012 and 05/OF/2012 witnessed by DNV GL Venice, dated 2013-05-31.



Job Id: **262.1-017314-2**
Certificate No: **S-8072**

Tests carried out

Type Testing was performed in accordance with Standard for Certification No. 2.7-1 and EN 1677-4 "Components for slings Safety - Part 4; Links, Grade 8".

Marking of product

Marking should be according to DNV 2.7-1 Offshore Containers, Chapter 8 and EN 1677-4 "Components for slings Safety - Part 4; Links, Grade 8".

Periodical assessment

In order to maintain the validity of this type approval certificate, retention surveys are to be carried out according to DNV 2.7-1. Intervals are not to exceed 6 months.

END OF CERTIFICATE

Appendix 1

Product description and details

Master links serie F

Type	Diameter [mm]	Size designation [mm]	WLL [t]	MPF [kN]	Min. BF [kN]
F22	23	23 x 140 x 270	5.8	142	228
F25	25	25 x 140 x 270	8.83	216	346
F28	27	27 x 140 x 270	11.8	289	463
F32	33	33 x 140 x 270	17.1	419	671
F36	36	36 x 140 x 270 *	23	564	902
F40	40	40 x 150 x 275	28.1	689	1100
F45	45	45 x 180 x 340	38.3	939	1500
F50	50	50 x 190 x 350	45	1100	1770
F60	60	60 x 230 x 430	65	1590	2550
F70	70	70 x 260 x 480	85	2080	3330

*)This size has smaller dimensions than table 2 in EN 1677-4.

Intermediate links serie M

Type	Diameter [mm]	Size designation [mm]	WLL [t]	MPF [kN]	Min. BF [kN]
M16	17	17 x 80 x 140 *	4.4	108.4	173.4
M18	19	19 x 75 x 135 *	6.7	165	264
M20	20	20 x 75 x 135 *	8.99	220.5	353
M26	27	27 x 100 x 180 *	13	319.5	511.2
M30	30	30 x 110 x 190 *	17.5	430	688
M32	33	33 x 110 x 200 *	21.4	525	840
M36	36	36 x 125 x 225 *	29.1	715.4	1145
F40	40	40 x 150 x 275	34.2	841	1345
F50	50	50 x 190 x 350	49.5	1215	1943
M56	56	56 x 200 x 400	64.7	1588	2541

*)This size has smaller dimensions than table 2 in EN 1677-4.

Master link assemblies serie FM

Type	Diameter [mm]	WLL [t]	MPF [kN]	Min. BF [kN]
F22M16	23/17	5.8	142	228
F25M18	25/19	8.83	216	346
F28M20	27/20	11.8	289	463
F32M26	33/27	17.1	419	671
F36M30	36/30	23	564	902
F40M32	40/33	28.1	689	1100
F45M36	45/36	38.3	939	1500
F50F40	50/40	45	1100	1770
F60F50	60/50	65	1590	2550
F70M56	70/56	85	2080	3330