
List 9b
Approved Manufacturers of
Fittings for Chain Cable

This list identifies works approved by Lloyd's Register Group Limited (LR) for the manufacture of fittings for chain cable in accordance with the requirements of LR's Rules for the Manufacture, Testing and Certification of Materials, Chapter 10.

Approval is based on the nominal diameter of the chain cable for which the fittings are intended.

The information listed for each works is a summary of the product, grade and maximum nominal diameter approved.

Where required further information should be obtained from the current certificate of approval issued to the manufacturer by LR.

Works designated "MQS Approved" are also approved under the Materials Quality Scheme in accordance with LR's Rules for the Manufacture, Testing and Certification of Materials, Chapter 1 Section 2.

Approval only covers the manufacturing location listed, it does not extend to other works owned by the same company.

The local LR surveying office is also listed.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
China, People's Republic of				
ASIAN STAR (ZHENJIANG) MOORING CHAIN CO., LTD.	Forged Fittings Welded Fittings	U3 R3, R3S, R4, R4S	102.00 173.00	Nanjing
<p>8# nanwei 4th Road Dingmao New Area Zhenjiang, Jiangsu Tel: +86 555 2103822 Fax: +86 555 2100186 Email: XSK@MASYXML.com.cn Web: www.masanchorChina.com Certificate #: MD00/4266/0001/9b Expiry date: 09/12/2016</p>				
FOSHAN MARINE ANCHOR CHAIN LTD (FMAC)	Forged Fittings	U3	122.00	Guangzhou
<p>No. 68 Jin Gang Road Jin Ben Town, San Shui District, Foshan City. Guang Dong Province Tel: +86 757 87510564 Fax No: +86 75787516281 E-mail: sunping@fmac.com.cn www.fmac.com.cn Certificate No: MD00/4830/0001/9b Expiry Date: 24/07/2019</p>				
JIANGSU AOHAI MARINE FITTINGS CO., LTD.	Forged Fittings	U3	122.00	Jiangyin
<p>Wuwei Village Jiangyin-Jingjiang Industrial Zone Jiangsu Province Tel: +86 0523 84805088 Fax: +86 0523 84808088 Email to: yangyin0808@126.com Web http://www.cn-ahac.com Certificate No.: MD00/4236/0002/9b Expiry Date: 13/10/2019</p>				
JIANGSU ASIAN STAR ANCHOR CHAIN Co., Ltd	Forged Fittings	U2, U3 R5 R3, R3S, R4, R4S	122.00 137.00 187.00	Jiangyin
<p>Dongxing Town, 214533 Jingjiang Tel: +86 523 4686 808 Fax: +86 523 4681 390 Email: taojj@pub.tz.jsinfo.net Web: http://www.anchor-chain.com Grades U2 approved for the normalized supply condition and grade U3 approved for the quenched and tempered supply condition. Blooms for R3, R3S, R4, R4S fittings supplied by Jiangying Xingcheng Special Steel Works Co., Ltd. Billet for R5 fittings supplied by Baoshan Iron & Steel Co., Ltd. Approved for forge, heat treatment and proof load test the fittings Certificate #: MD00/1974/0011/9b Expiry date: 27/07/2020</p>				
JINGJIANG ZHENGMAO ANCHOR CHAIN	Forged Fittings	U2, R3, R3S, R4 U3	152.00 172.00	Jiangyin
<p>ACCESSORIES CO., LTD. Maqiao Town, Jingjiang City, Jiangsu Province, PC 214525 Tel: +86 0523 8439 2158 Fax: +86 0523 8439 5088 E-mail: zhuzhou1985@126.com The scope of approval is restricted to kenter shackles only; Grade U2 to the maximum common link chain diameter of 152mm (152mm actual diameter) supplied in the Normalised condition, Grade U3 to the maximum common link chain diameter of 172mm (172mm actual diameter) supplied in the Quenched and Tempered condition; Grades R3, R3S and R4 to the maximum common link chain diameter of 152mm (152mm actual diameter) supplied in the Quenched and Tempered condition. Joining (dee) shackles (159mm actual diameter) and end shackles (171mm actual diameter) to the maximum common link chain diameter of 122mm for Grade U2 & U3; grade U2 supplied in the Normalised conditions and grade U3 supplied Quenched and Tempered condition. The approval of the mooring grade fittings is restricted to bar materials supplied by Jiangyin Xingcheng, grade R30Mn2 for R3, grade 28MnCrMo for R3S, grade 22MnCrNiMo for R4, and grade R4 from Daye Special Steel for R4. The scope of approval also covers for the supply of the detailed fittings and swivels in Grade U3 (146mm actual diameter) for 122mm common link chain diameter in the un-heat treated condition, to the maximum diameters above, heat treatment and required testing to be carried out by the chain manufacturer purchasing the fittings. Certificate Number: MD00/3826/0005/9b Expiry: 28/06/2019</p>				
LAIWU STEEL GROUP ZIBO ANCHOR CHAIN CO., LTD.	Forged Fittings	U2, U3	122.00	Qingdao

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
<p>Heiwan Town Zichuan District Zibo City Shandong Province Tel: +86 (0) 533 506 9323 Fax: +86 (0) 533 506 9302 Email: lgchains@163169.net Web: www.lgchains.com</p> <p><i>The scope of approval is for to joining shackles (159mm actual diameter); end shackles (171mm actual diameter); kenter shackles (122mm actual diameter); swivels (146mm actual diameter); to the maximum common link chain diameter of 122mm.</i></p> <p><i>Ships swivel shackles in accordance with approved designs are accepted for approved applications for use with the maximum common link chain diameter of 117mm.</i></p> <p><i>Approval is for grade U2 supplied in the normalised condition; grade U3 supplied in the quenched and tempered condition.</i></p> <p><i>Certificate Number: MD00/2135/0006/9b Expiry: 20/08/2021</i></p>				
<p>LAIWU STEEL GROUP ZIBO ANCHOR CHAIN CO., LTD. Qingdao Branch No. 269, Yanhe Road, Economic & Technical Development Zone, Qingdao, Shandong Province, 266510, Tel: 0532-86837880 Fax: 0532-86837880 Email: zbml@lgchains.com Web: www.lgchains.com Cert Number: MD00/3779/0002/9b Expiry: 10/05/2019</p>	Forged Fittings	U3	132.00	Qingdao
<p>QINGDAO ANCHOR CHAIN CO., LTD. 106 Aolan Road Jimo Qingdao, 266200 Tel: +86 (0)532 88513117 Fax: +86 (0)532 88511501 E-mail: qac@public.qd.sd.cn Website: www.qd-anchor-chain.com</p> <p><i>Approval is for grade U2 supplied in the normalised condition; grade U3 supplied in the quenched and tempered condition.</i></p> <p><i>Certificate Number: MD00/1226/0009/9b Expiry: 29/10/2021</i></p>	Forged Fittings Welded Fittings	U2, U3 U2, U3	152.00 152.00	Qingdao
<p>QINGDAO ANCHOR CHAIN CO., LTD. No. 1 Branch 6 Lingshan Road, Lingshan Town Jimo, Qingdao Shangdong Province 266219 Tel: +86 (0)532 88513117 Fax: +86 (0)532 88511501 E-mail: qac@public.qd.sd.cn Website: www.qd-anchor-chain.com</p> <p><i>Certificate Number: MD00/4466/0002/9a Expiry: 10/04/2021</i></p>	Forged Fittings Welded Fittings	R4 U2, U3, R3, R3S R4 U2, U3, R3, R3S	147.00 152.00 147.00 152.00	Qingdao
<p>ZHEJIANG SHUANGNIAO ANCHOR CHAIN CO., LTD. Sanwang Industrial Park, Huangze Town, Shengzhou City, Zhejiang Province Tel: +86 (0) 575 8350 7866 Fax: +86 (0) 575 8350 7766 email: zjsnac@163.com web: www.zjsnac.cn</p> <p><i>Grade U2 supplied in normalized condition, Grade U3 supplied in the quenched and tempered condition.</i></p> <p><i>Certificate Number: MD/00/3757/0004/9b Expiry date: 11/03/2022</i></p>	Forged Fittings	U2, U3	76.00	Zhoushan
<p>ZHENGMAO GROUP CO., LTD.</p>	Forged Fittings Welded Fittings	U2 U3 R3 U1, U2, R4 U3 R3S	152.00 172.00 105.00 152.00 172.00 182.00	Nanjing

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
<p>Wufeng Kou Zhenjiang Jiangsu Province PC 212011 Tel: +86 511 8451 1151 Fax: +86 511 8451 1152 Email: wangxt151@163.com Web: http://gb.anchorchain-china.com</p> <p><i>The approval of forged fittings covers for heat treatment and proof load testing only. The as-forged fittings are to be from LR approved manufacturer.</i> <i>R3 bars up to 105mm diameter is to be supplied by Jiangyin Xingcheng Special Steel Works Co. Ltd only.</i> <i>R3S bars up to 182mm diameter is to be supplied by Jiangyin Xingcheng Special Steel Works Co. Ltd only.</i> <i>R4 bars up to 152mm diameter is with bars supplied by Jiangyin Xingcheng Special Steel Works Co. Ltd and Daye Special Steel Co. Ltd.</i> <i>Certificate Number: MD00/1716/0006/9b Expiry: 12/05/2022</i></p>				
<p>ZHOUSHAN ZHONGNAN ANCHOR CHAIN CO LTD.,</p> <p>Pingyangpu Putuo, Zhoushan City, Zhejiang Province, 316101 Tel No. +86 580 3695386 Fax +86 580 3695386 Email znmz@163.com Web: http://www.zzhongnan.cn</p> <p><i>Certificate No: MD00/4035/0002/9b Expiry 26/06/2018</i></p>	Forged Fittings	U2	78.00	Zhoushan
		U3	95.00	
	Welded Fittings	U2	78.00	
		U3	95.00	

France

<p>MARIT & DAVAINÉ CHÂÎNES 230 avenue Desandrouins F-59300 Valenciennes Tel +33 3 2719 3270 Fax +33 3 2719 3271 email: guy@marit.fr web: www.marit.fr</p> <p><i>Certificate #: MD00/0994/0008/9b Expiry date: 27/08/2020</i></p>	Forged Fittings	U1, U2, U3, R3, R3S, R4	81.00	Lyon
<p>SAS Société Nouvelle LE BEON MANUFACTURING Lorient Cedex 7 Bd Louis Nail 56323 LORIENT Tel: +33 297 37 22 00 Fax: +33 297 37 12 15 email: info@le-beon.com web: www.le-beon.com</p> <p><i>Approval is for grade U2 supplied in the normalised condition; grades U3, R3, R3S, R4, R4S and R5 supplied in the quenched and tempered condition.</i></p> <p><i>Semi-finished products for R3, R3S and R4 mooring grade chain cable fittings are restricted to supply from the approved works Akers France, Gerdau Aceros Especials - Reinoso and Ascometal Dunkerque.</i></p> <p><i>Semi-finished products for R4S and R5 grade mooring chain cable fittings are restricted to supply from the approved works Akers France.</i></p> <p><i>Certificate Number: MD00/0529/0011/9b Expiry: 25/02/2022</i></p>	Forged Fittings	R4S, R5 U2, U3, R3, R3S, R4	120.00 160.00	Nantes

Germany

<p>ANKER SCHROEDER ASDO GmbH Hannöversche Straße 48 44143 Dortmund Tel: +49 (0)231 51701 16 Fax: +49 (0)231 51701-816 email: andreas.hesse@anker.de web: www.anker.de</p> <p><i>Certificate No. MD00/0107/0008/9b Expiry date: 18/11/2016</i></p>	Forged Fittings	U1, U2, U3, R4	160.00	Hamburg
<p>HÖNNETALER KETTENFABRIK SCHULTE & Co. Bundesstraße 30 D-59846 Sundern-Hövel Tel: +49 (0)2935 809-0 Fax: +49 (0)2935 4521 email: info@hoennetal-ketten.de web: www.hoennetal-ketten.de</p> <p><i>Certificate No. MD00/2583/0006/9b Expiry date: 11/09/2017</i></p>	Welded Fittings	U1, U2, U3	26.00	Hamburg
<p>KETTENFABRIK MESTER GmbH Bornstraße 280 D-44145 Dortmund Tel +49 (0)231 8610300</p> <p><i>E-mail: info@mesterkette.com Website: www.mesterkette.com</i></p> <p><i>Certificate No. MD00/0841/0008/9b Expiry date: 03/04/2017</i></p>	Welded Fittings	U1, U2, U3	105.00	Hamburg

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
SCHMIEDESTÜCK-VERTRIEB FEUERSTEIN GMBH Beuler Höhe 16 D-44525 Hattingen Tel: +49 (0)2324 9507-50 Fax: +49 (0)2324 9507-53 email: patrick@feubo.de Web: www.feubo.de Certificate No. MD00/2015/0007/9b Expiry date: 25/01/2019	Forged Fittings	R3, R3S, R4 U1, U2, U3	84.00 153.00	Hamburg
	Cast Fittings	U2, U3	153.00	
	STAHLHAMMER BOMMERN GMBH	Forged Fittings	U1, U2, U3 R4	
Member of COLUMBUS McKINNON Corporation Carl-Zeiss Strasse 7 D-59077 Hamm Tel: +49 (0)2381 91498-44 Fax: +49 (0)2381 91498-21 EMail: phankus@stahlhammer.de Website: www.stahlhammer.de Certificate #: MD00/1422/0008/9b Expiry date: 19/01/2019				
THIELE GmbH & CO. KG Werkstr. 3 D-58640 Iserlohn-Kalthof Tel: +49 (0)2371 947 377 Fax: +49 (0)2371 947 234 Mobile: +49 151 16709191 Email: mailto:jschwartz@thiele.de Web: http://www.thiele.de Certificate #: MD00/1513/0009/9b Expiry date: 01/07/2021	Forged Fittings	R3, R3S, R4 U3 U1, U2	76.00 132.00 140.00	Hamburg

India

INDIAN CHAIN PRIVATE LTD. 238-B, A.J.C. Bose Road KOLKATA 700 020 Tel: +91 33 40177000 Fax: +91 33 2289 4217 M +91 9830056850 email: info@indianchain.com web: www.indianchain.com Certificate No. MD00/0757/0009/9b Expiry date: 31/12/2019	Forged Fittings	U1, U2, U3	81.00	Kolkata
	Welded Fittings	U3	66.00	
		U1, U2	70.00	

Japan

HAMANAKA CHAIN MFG. CO., LTD. Himeji Factory (Aboshi Plant) 810-1, Oheshima Aboshi-ku Himeji-city Hyogo-pref. Tel: +81 792 73 7111 Fax: +81 792 73 0313 Email: mailto:info@hamanaka-chain.co.jp Web: http://www.hamanaka-chain.co.jp For forged fittings the scope of approval is restricted to the heat treatment and testing of fittings supplied in the as forged condition from approved works. For cast fittings, the scope of approval is restricted to the testing of fittings supplied in the finished condition from approved works. Bar materials for mooring grades R3, R3S and R4 for the manufacture of welded fittings are restricted to supply by Nippon Steel & Sumitomo Corporation - Muroran Works. For welded fittings grades U1 and U2 are supplied in the normalised condition; grades U3, API 2F, R3, R3S and R4 are supplied in the quenched and tempered condition. Certificate Number: MD00/0642/00010/9b Expiry: 18/05/2019	Forged Fittings	U3	114.00	Kobe
	Cast Fittings	U3	155.00	
	HAMANAKA CHAIN MFG. CO., LTD.	Forged Fittings	U3	
Himeji Factory (Shirahama Plant) 770, Ko Shirahama-cho, Himeji, Hyogo Tel: +81 (0)79 273 7111 Fax: +81 (0)79 273 0313 Email: yonezawam@hamanaka-chain.co.jp Web: www.hamanaka-chain.co.jp U3 Cast Fittings approval is for the testing of fittings only, supplied by an approved works. Certificate Number: MD00/4605/0001/9b Expiry Date: 31/05/2019	Cast Fittings	U3	155.00	

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
KAWAGUCHI METAL INDUSTRIES CO., LTD. 18-19, Miya-cho Kawaguchi-shi Saitama Pref. 332-8502 <i>Tel +81 (0)48 259 1112 Fax +81 (0)48 255 1125</i> <i>email: a-murata@kawakinkk.co.jp</i> <i>Certificate No: MD00/0831/0001/9b Expiry date: 18/06/2021</i>	Cast Fittings	U1, U2, U3	132.00	Yokohama
KUREHA SEIKO CO., LTD 4-41, 5-Chome Takeshima-cho Nishiyodogawa-ku Osaka <i>Tel +81 6 6471 4331 Fax +81 6 6475 0023</i> <i>email: matsumoto@kurehaseiko.co.jp</i> <i>Certificate No. MD00/0906/0007/9b Expiry date: 30/10/2019</i>	Cast Fittings	R3 U1, U2, U3	132.00 152.00	Kobe
MIYAGAMI INDUSTRY CO., LTD. Mizuhai 4-9-14, Higashiosaka City <i>Tel: +81 (0)72 962 0631 Fax: +81 (0)72 962 0634</i> <i>Approved for as-forged fittings only</i> <i>Certificate Number: MD00/4154/0002/9b Expiry Date: 28/04/2019</i>	Forged Fittings	U3	114.00	Kobe
NIHON NATTO CO., LTD. Yumesaki Factory Oyadani 2098-27, Yumesaki-cho, Himeji City, Hyogo, <i>Tel: +81 (0)79 273 7111 Fax: +81 (0)79 273 0313</i> <i>email: yonezawam@hamanaka-chain.co.jp</i> <i>The scope of approval is restricted to kenter shackles to the above maximum chain cable common link diameter supplied in the as-forged condition for final heat treatment, load testing and mechanical testing carried out by the approved chain cable manufacturer.</i> <i>Certificate Number: MD00/4157/0003/9b Expiry Date: 27/04/2022</i>	Forged Fittings	U3	90.00	Kobe
NIPPON CHAIN & ANCHOR Co., Ltd. Hiro Factory 1-2-43 Hiro-Shiratake Kure City Hiroshima Pref. P.C. 737-0144 <i>Tel. +81 (0)823 71 1144 Fax +81 (0)823 73 6460</i> <i>Email: m.kashiki@kotobukikogyo.co.jp</i> <i>Certificate No. MD00/1082/0008/8 Expiry date: 23/11/2017</i>	Forged Fittings Cast Fittings Welded Fittings	U1, U2, U3 U1, U2, U3 R4 U1, U2, U3, R3	152.00 152.00 84.00 152.00	Kobe
NITTO TANZO KOGYO CO., LTD. 4 Chrome, 20-27, Dimon-cho, Fukuyama City, Hiroshima, <i>Tel: +81 (0)79 273 7111 Fax: +81 (0)79 273 0313</i> <i>email: yonezawam@hamanaka-chain.co.jp</i> <i>Approved for as- forged fittings only</i> <i>Certificate Number: MD00/4158/0003/9b Expiry Date: 27/04/2022</i>	Forged Fittings	U3	90.00	Kobe
SUMITOMO HEAVY INDUSTRIES HIMATEX CO LTD., ISOURA WORK 16-4 Isoura-cho Niihama-shi Ehime-pref 792-0002 <i>Tel: +81 897 32 6504 Fax: +81 897 32 6496</i> <i>email: mailto:ykm_kuwano@shuff.shi.co.jp</i> <i>website: http://www.shinsissa.co.jp</i> <i>Certificate No. MD00/0793/0007/9b Expiry date: 22/04/2019</i>	Forged Fittings	U1, U2, U3	90.00	Kobe
TOA CHAIN MANUFACTURING CO., LTD. Otsu-362 Shirahama-cho Himeji-city Hyogo-pref. <i>Tel: +81 (0)792 46 0555 Fax: +81 (0)792 46 3040</i> <i>Certificate No. MD00/1532/0008/9b Expiry date: 12/05/2020</i>	Welded Fittings	U1, U2, U3	70.00	Kobe

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
Korea				
DAI HAN ANCHOR CHAIN MFG.CO., LTD. 74, Yeomjeon-ro 261beon-gil Michuhol-Gu Incheon Tel: +32 32 862 0091 Fax: +32 863 5114 Email: mailto:daihan@dhac.co.kr Web: http://www.dhac.co.kr Certificate No. MD00/0371/0011/9b Expiry date: 27/01/2022	Forged Fittings	U1, U2, U3, R3, R3S, R4	132.00	Seoul
	Cast Fittings	R4	152.00	
		U1, U2, U3, R3, R3S	162.00	
DAI HAN STEEL Co., Ltd. 182, Hwanggeum-ro, 127 Beon-gil, Yangchon-eup, Gimpo-si, Gyeonggi-do, Tel: +82 (0)31 996 2234 Fax: +82 (0)31 997 6565 Mob: +81 (0)10 6390 9062 email: hong9062@naver.com Certificate No. MD00/0377/0010/9b Expiry date: 04/01/2020	Cast Fittings	R4	152.00	Seoul
		U1, U2, U3, R3, R3S	162.00	
PU SUNG METAL CO., LTD. 2Da 704 (Jeongwang-Dong), 75, Gunjacheon-ro, 185 beon-gil, Shiheung-Si Kyunggi-Do 429-849 Tel +82 31 497 1357 Fax +82 31 497 4939 E-mail: phodia73@hanmail.net <i>The scope of approval includes for; Kenter Shackles the maximum actual diameter of 132mm; End Shackles the maximum actual diameter of 185mm; Dee Shackles the maximum actual diameter of 172mm; Swivels maximum actual diameter of 158mm; all suitable for the above maximum common link chain diameter.</i> <i>All grades supplied in the Quenched and Tempered condition.</i> <i>The approval of the mooring grade fittings is restricted to bar materials supplied by SeAH Besteel Corp. Kunsan Works.</i> Certificate Number: MD00/3226/0005/9b Expiry: 31/03/2021	Forged Fittings	U1, U2, U3, R3, R3S, R4	132.00	Seoul
Spain				
GUVISA, S.L. Avda. Cervantes, 47 48970 BASAURI APARTADO 2 Vizcaya Tel +34 94 4261144 Fax +34 94 4493539 email: calidad.gv@guivisa.com web www.guivisa.com Certificate No. MD00/0623/0007/9b Expiry date: 16/09/2019	Cast Fittings	U1, U2, U3	123.00	Bilbao
SIDENOR Forgings & Castings S.L. Paseo Alejandro Calonje, 1 39200 Reinoso (Cantabria) Tel: +34 942 775 288 Fax: +34 609 242 896 email: borja.lambea@gsidenor.com web www.sidenor.com Certificate No. MD00/0546/0010/9b Expiry date: 17/06/2020 <i>Approval includes R5 shackles for 165mm diameter chain and polyester (H-block dimensions 966mm length x 380mm width x 314mm thickness).</i>	Forged Fittings	U1, U2, U3	123.00	Bilbao
		R4	132.00	
		R5	165.00	
VICINAY CADENAS S.A. Forged Fittings		U2, U3, R3, R3S, R4, R4S, R5	152.00	Bilbao

List 9b
Approved Manufacturers of
Fittings for Chain Cable

Name and Address	Category	Grades	Max Nominal Diameter (mm)	Office
<p>Galdames Factory Poligono Industrial LA ACEÑA No. 3 Pabellon 12 48191 GALDAMES (VIZCAYA) Tel: +34 946 100016 Fax: +34 946 100114</p> <p>E-mail: gmatthies@vicinaymarine.com</p> <p>Website: www.vicinaycadenas.net</p> <p><i>The scope of approval is for the following fittings in the above Grades to the diameters below suitable for the maximum chain cable diameter shown above. Kenter Shackles to 152mm actual diameter; End Shackles to 213mm actual diameter; Dee Shackles to 198mm actual diameter and Swivels to 182mm actual diameter. Approval includes R5 shackles for 165mm diameter chain and polyester (H-block dimensions 966mm length x 380mm width x 314mm thickness). Grade U2 supplied in normalized condition, Grade U3 supplied in the quenched and tempered condition. The approval of the mooring grade fittings is restricted to bars, billets and blooms supplied by Gerdau Aceros Especiales Europa S.L. (Gerdau) Planta Reinoso; materials are to be supplied to the Vicinay purchasing specifications MFR3-R35; MFR4;MFR45; MFR5; for the appropriate grade, the latest issue of these specifications are accepted subject to these maintaining the required material conditions under which approval was granted for each. Certificate Number: MD00/1634/0004/9b Expiry: 02/07/2021</i></p>				

The Netherlands

<p>GROFSMEDERIJ NIEUWKOOP B.V. Transportweg 47, 2421 LT Nieuwkoop, Zuid Holland, Tel: +31 (0)172 579303 Fax: +31 (0)172 571073 email: f.schuurman@dehaan-se.com web: www.gnweb.com</p> <p>Certificate No:MD00/4618/0002/3 Expiry Date: 04/10/2019</p>	Forged Fittings	R4	165.00	Amsterdam
--	-----------------	----	--------	-----------

United Kingdom

<p>AQUALIFT MARINE LTD. Meeting Lane Brierley Hill West Midlands DY5 3LB Tel: +44 01384 77255 Fax: +44 01384 77254 Email: sales@aqualift.co.uk Web page http: www.aqualift.co.uk Certificate No. MD00/1989/0007/9b Expiry date: 01/04/2020</p>	Forged Fittings	U2, U3	76.00	Liverpool
<p>MICRON ALLOY CASTINGS Platts Road Industrial Estate Amblecote Stourbridge West Midlands DY8 4YR Tel +44 (0)1384 393247 Fax: 01384 444860 email: stevemac@micronalloys.co.uk web: www.micronalloys.co.uk Certificate No. MD00/1845/0007/9b Expiry date: 16/06/2021</p>	Cast Fittings	U1, U2, U3	105.00	Liverpool
<p>THE SOLID SWIVEL CO., LTD. Portersfield Road Cradley Heath West Midlands B64 7BL Tel: +44 1384 636421 Fax: +44 1384 639163 email graham@solidswivel.co.uk web: www.solidswivel.co.uk</p>	Forged Fittings	U2, U3	66.00	Liverpool

The scope of approval is for the following fittings in the above Grades to the diameters below suitable for the maximum chain cable diameter shown above. Kenter Shackles to 66mm actual diameter; End Shackles to 92mm actual diameter; Dee Shackles to 86mm actual diameter and Swivels to 79mm actual diameter; including MOD naval fittings of similar design and maximum dimensions. Grade U2 supplied in normalized condition, Grade U3 supplied in the quenched and tempered condition. The scope of approval; included for fittings (as above) in Aluminium Silicon Bronze to Grade 2 of NES 171 (Def Stan 07-209) suitable for a maximum chain cable diameter of 26.00mm.

Certificate Number: MD00/3028/0008/9b Expiry: 23/11/2021

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

© Lloyd's Register Group Limited 2019. All rights reserved.

