### 1970 No. 1453

# ANCHOR AND CHAIN CABLE

### The Anchors and Chain Cables Rules 1970

Made - - - 1st October 1970

Laid before Parliament 9th October 1970

Coming into Operation 19th October 1970

The Board of Trade in exercise of the powers conferred on them by section 1 of the Anchors and Chain Cables Act 1967(a) and of all other powers enabling them in that behalf hereby make the following Rules:—

### Citation, Commencement and Interpretation

- 1.—(1) These Rules may be cited as the Anchors and Chain Cables Rules 1970, and shall come into operation on 19th October 1970.
- (2) The Interpretation Act 1889(b) shall apply to the interpretation of these Rules as it applies to the interpretation of an Act of Parliament.

## Definitions and Application

2.—(1) In these Rules, unless the context otherwise requires, the following expressions shall have the following meanings respectively:—

"the Board" means the Board of Trade;

"Certifying Authority" means the Board and any person authorised by the Board and includes the Secretary of State for Defence, Lloyd's Register of Shipping, the British Committee of the Bureau Veritas, the British Committee of Det Norske Veritas, the British Technical Committee of the American Bureau of Shipping and the British Committee of Germanischer Lloyd being persons so authorised;

"lugless shackle" means a device used for joining cables which in use has an outline in shape and dimensions similar to the links of the cables which it joins;

"open link or short link cable" means cable constructed of links not having studs;

"stud link cable" means cable in which the links are fitted with studs or a similar component for minimising deformation of the links when the cable is under load;

"Supervisor of Tests" means an officer of a Certifying Authority who is competent to supervise tests of anchors and chain cables in accordance with these Rules;

"testing establishment" means any premises complying with the requirements of Rule 3(1);

"verified testing machine" means a testing machine complying with and verified in accordance with the requirements of Rule 4;

- "the 1899 Act" means the Anchors and Chain Cables Act 1899(a); "tonne" means a metric ton of 1,000 kilogrammes.
- (2) These Rules apply to all anchors and chain cables for use in ships registered in the United Kingdom except:—
  - (a) anchors of 76 kilogrammes or less in weight;
  - (b) chain cables of less than 12.5 millimetres in diameter;
  - (c) anchors or chain cables manufactured outside the United Kingdom before the coming into force of these Rules and first taken on board a ship registered in the United Kingdom as part of its equipment not more than six months after that date;
  - (d) anchors or chain cables exempted from these Rules by the Board.
- (3) The weight of any anchor shall for the purposes of these Rules be taken to be:—
  - (a) for stockless anchors: the weight of the anchor including its shackle if any; and
  - (b) for stocked anchors: the weight of the anchor including its shackle, if any, but excluding the stock.

### Testing Establishments

- 3.—(1) Testing machines used for testing anchors and chain cables in accordance with these Rules shall be installed in premises having proper protection from weather, handling facilities for the articles to be tested, adequate lighting and facilities for proper inspection of the anchors and chain cables after testing.
- (2) A testing establishment shall not be used for testing anchors and chain cables unless there is in force a certificate, issued by a surveyor of ships appointed under the Merchant Shipping Act 1894(b), or by such other person as the Board may appoint, to the effect that he has inspected and approved the establishment for such use. The person making the inspection shall send a copy of the certificate to the Board, and may revoke the certificate if he ceases to approve the establishment on further inspection. A certificate shall not remain in force for more than two years.

### Requirements for testing machines

- 4.—(1) Testing machines used for proof load test of anchors and for tensile breaking load test and tensile proof load test of chain cables and their accessories shall comply with the following:—
  - (a) Every tensile testing machine used in a testing establishment shall be of suitable design and construction for its intended duty and shall be subjected to a load verification:
    - (i) in the case of machines not verified under the 1899 Act, before being brought into use, and
    - (ii) in the case of machines verified under the 1899 Act, within 12 months of the last verification;

and thereafter in both cases at intervals not exceeding 12 months. Verification shall also be made after any major overhaul or when any part affecting the accuracy of the machine is repaired or replaced or when the machine is moved to another site. Every verification required by this paragraph shall be witnessed by a surveyor of ships appointed under

- the Merchant Shipping Act 1894 or by such other person as the Board may appoint. Any person undertaking such verification shall report the result to the Board.
- (b) The straining arrangement of every tensile testing machine used for tensile proof load tests of chain cable shall be such as to allow such a length of cable as defined in Rule 7(4) to be tested without the need to take a fresh hold to complete the test.
- (2) Testing machines used for impact testing of Grade 3 cables shall be suitable for Charpy tests and shall comply with the requirements for such machines specified in British Standards Specification No. 131: 1959, Part 2, issued by the British Standards Institution.

# Applications for Tests

- 5.—(1) Application for the testing of an anchor or chain cable shall be made to a Certifying Authority who if they agree to be responsible for the testing shall designate one or more Supervisor of Tests to supervise the testing.
- (2) The person applying for the testing shall make available to the Certifying Authority such information about the material from which the anchor or chain cable is manufactured and its method of manufacture as that Authority may require.

## Tests for Anchors

- **6.**—(1) The anchor, including its shackle if any, shall be tested by subjecting it on a verified testing machine to the proof load specified as being appropriate to its weight in Schedule 1 to these Rules.
- (2) If for the purposes of the Merchant Shipping (Cargo Ship Construction and Survey) Rules  $1965(\mathbf{a})$  or the Merchant Shipping (Passenger Ship Construction) Rules  $1965(\mathbf{b})$  an anchor of special type has been accepted by the Certifying Authority as being as effective as an anchor of conventional design but of greater weight, an anchor of that special type may at the request of the person presenting the anchor for testing be subjected to the test appropriate to an anchor of such greater weight: provided that the weight permitted for this purpose shall not exceed the actual weight of the anchor being tested by more than  $33\frac{1}{3}$  per cent.
- (3) The anchor, including its shackle, shall be deemed to have passed the test, if after the application of the test it is in the opinion of the Supervisor of Tests without material deformation, flaw or weakness.

# Tests for Chain Cables

- 7.—(1) Before any chain cable is tested the Supervisor of Tests shall satisfy himself as to the quality of the materials from which the cable is manufactured, the method of manufacture, and its grade ascertained in accordance with Schedule 2 to these Rules.
- (2) Chain cable shall be tested by subjecting it on verified testing machines to the tensile breaking load test and tensile proof load test specified respectively in paragraph (5) and (6).
- (3) Chain cable of Grade 3 shall in addition to the tests prescribed in the preceding paragraph be subjected to mechanical tests in accordance with paragraph (7).

- (4) For the purposes of this Rule 27.5 metres of chain cable shall be a length: Provided that:—
  - (a) a complete chain cable shorter than 27.5 metres shall be treated as a length;
  - (b) where a complete cable is not exactly divisible into lengths of 27.5 metres the piece remaining shall be treated as a length, except that where such a piece remaining comprises less than two complete links it may be included in the previous length.
- (5) Tensile Breaking Load Tests:—
  - (i) The number of samples to be taken from lengths of the same grade and diameter presented for testing at one time shall be that set out in Schedule 3 to these Rules in relation to that grade.
  - (ii) Such tests shall be carried out in the following manner:—
    - (a) A piece of three links shall be selected by the Supervisor of Tests and cut from the cable, and the sample so obtained shall be subjected to the tensile breaking load specified in Schedule 4 to these Rules in relation to cable of the relevant diameter.
    - (b) If after application of such a test load the sample is unbroken and in the opinion of the Supervisor of Tests is without material flaw or other defect, such sample shall be deemed to have satisfactorily withstood the tensile breaking load.
    - (c) If the selected sample fails to withstand satisfactorily the appropriate tensile breaking load the Supervisor of Tests shall select another sample of three links from the same length of chain cable, as that from which the first sample was taken, and it shall be tested in the manner specified in sub-paragraphs (a) and (b) above.
  - (iii) If either the first or second of the three link samples withstands satisfactorily the tensile breaking load, each of the lengths which the test sample or samples represent shall be deemed to have passed the tensile breaking load test.
  - (iv) (a) If both the first and second of the selected three link samples fail to withstand satisfactorily the tensile breaking load, the length from which the samples were taken shall be rejected and no further testing shall be undertaken upon it.
    - (b) If required by the person on whose behalf the tests are being carried out, tests may be continued upon any remaining lengths which the test samples represented (if any); in such case each remaining length shall be subjected to tests in accordance with subparagraph (ii) above, and if either the first or second of any three link samples selected withstands satisfactorily the appropriate tensile breaking load, that length shall be deemed to have passed the tensile breaking load test.
  - (v) Where the required tensile breaking load is in excess of 650 tonnes the Board may permit in lieu of the application of the tensile breaking load test specified above such alternative method of testing the tensile breaking load of the material of the selected sample piece as is at least as effective.

### (6) Tensile Proof Load Test:

(i) When satisfactory tensile breaking load tests in accordance with paragraph (5) of this Rule have been made on samples representing any length of chain cable the Supervisor of Tests shall then test every

- such length separately by subjecting it to the tensile proof load specified in Schedule 4 to these Rules in relation to cable of the relevant diameter and grade.
- (ii) The chain cable shall be deemed to have passed such test, if after the application of the test it is, in the opinion of the Supervisor of Tests, without material deformation, flaw or weakness.

### (7) Mechanical Tests:—

- (i) Two mechanical tests
  - (a) to determine the ultimate tensile strength and related elongation, and
  - (b) to determine the impact value
  - of the material from which the chain cable is manufactured, shall be carried out on one sample in the case of the test at (a) and on one sample which shall be cut into three specimens in the case of the test at (b), taken at places selected by the Supervisor of Tests from every four or less lengths of Grade 3 cable of the same diameter presented for testing at one time. The samples shall be deemed to have passed the tests if the tests show that the material continues to be within the limits of mechanical properties set out for Grade 3 cable in Schedule 2.
- (ii) If the sample fails in the case of test (a) or test (b) a further sample or samples as the case may be shall be selected by the Supervisor of Tests from the same four lengths or less as those from which the first samples were taken, and they shall be tested in the manner specified in sub-paragraph (i) above.
- (iii) The lengths represented by the samples shall be deemed to have passed the mechanical tests if the samples referred to in (i) and (ii) above have passed both the test at (a) and the test at (b).
- (8) For the purpose of Schedule 4 the diameter of worn chain cable tested in accordance with this Rule shall be the mean diameter where the cable is most worn.

### Tests for Chain Cable Accessories

- **8.**—(1) Before any chain cable accessory is tested the Supervisor of Tests shall satisfy himself as to the quality of the materials from which it is manufactured, the method of manufacture, its grade ascertained in accordance with Schedule 2 of these Rules and the size and grade of chain cable with which it is suitable to be used.
- (2) Subject to paragraph (5), every such accessory shall be tested by subjecting it on a verified testing machine to the tensile proof load test specified in paragraph (3) and samples of such accessories shall be subjected to the tensile breaking load test specified in paragraph (4).
- (3) Every such accessory shall be subjected to the tensile proof load test required by these Rules to be applied to the chain cable with which it is suitable to be used ascertained in accordance with paragraph (1) of this Rule.
- (4) (a) Except as provided in sub-paragraph (b) at least one from every batch of 25 or less of each type of such accessory of the same dimensions and materials presented for testing at one time shall be subjected to the tensile breaking load test required by these Rules to be applied to the chain cable with which they are suitable to be used ascertained in accordance with paragraph (1) of this Rule.

- (b) In the case of end or joining lugless shackles the maximum number in a batch for the purposes of the test referred to in the preceding sub-paragraph shall be 50.
- (5) If the person presenting the accessories for testing requests that they should be subjected to a tensile proof load only and it is intended that after testing the accessories shall be used as part of a ship's equipment the accessories need not be tested in accordance with paragraphs (2) and (3). In that event the strength of the accessories shall not be less than 40 per cent greater than that of the chain cable with which they are to be used and every such accessory shall be subjected to a tensile proof load test at a load equal to the tensile breaking load test specified in the appropriate table for the cable. Where such tensile proof load test exceeds 650 tonnes Rule 7(5)(v) shall apply.
- (6) The accessories shall be deemed to have passed the tests if after application of the tests the accessories are in the opinion of the Supervisor of Tests without material deformation, flaw or weakness.

### (7) Mechanical Tests:—

- (i) Every Grade 3 accessory and accessory incorporating a Grade 3 part which has been subjected to the tensile breaking load test in paragraph (4) above shall be subjected to two mechanical tests.
  - (a) to determine the ultimate tensile strength and related elongation, and
  - (b) to determine the impact value
  - of the material from which the accessory or part is manufactured. Such tests shall be carried out on one sample in the case of the test at (a) and on one sample which shall be cut into three specimens in the case of the test at (b), taken at places selected by the Supervisor of Tests. The samples shall be deemed to have passed the tests if the tests show that the material continues to be within the limits of mechanical properties set out for Grade 3 cable in Schedule 2.
- (ii) If the sample fails in the case of test (a) or test (b) a further sample or samples as the case may be shall be selected by the Supervisor of Tests from the accessory or part, and they shall be tested in the manner specified in sub-paragraph (i) above.
- (iii) The accessory or part represented by the samples shall be deemed to have passed the mechanical tests if the samples referred to in (i) or (ii) above have passed both the test at (a) and the test at (b).
- (iv) If an accessory or part incorporated in an accessory has passed the mechanical tests referred to above all the other accessories in the batch from which it was taken shall be deemed to have passed the mechanical tests.

### Marking of Anchors and Chain Cables

- **9.**—(1) Where an anchor or chain cable or any chain cable accessory has passed the tests prescribed in these Rules it shall be marked in accordance with the following provisions.
- (2) There shall be legibly and permanently stamped in a conspicuous place on every such anchor the particulars set out in Part 1 of Schedule 5 in the relationship and, so far as practicable, in the form set out in figure 1 in the said Part 1.
- (3) There shall be legibly and permanently stamped on every such chain cable accessory, and at each end and at intervals not exceeding 30 metres of

every such chain cable, the particulars set out in Part 2 of Schedule 5 in the relationship and, so far as practicable, in the form set out in figure 2 of the said Part 2.

(4) The letters indicating the Certifying Authority referred to in the said Parts 1 and 2 shall consist of not more than four initials, or three initials and a symbol.

# Certification of Anchors and Chain Cables

10. Where any anchor, chain cable or accessory is marked in accordance with Rule 9 the Certifying Authority if requested within one month after such marking by the person on whose application the tests were made shall deliver a certificate showing at least the appropriate information as set out in Schedule 6 to these Rules, certifying that the anchor, chain cable or accessory has passed the tests specified in these Rules.

# Exemptions

11. If the Board are satisfied that an anchor or chain cable, or class of anchors or chain cables, cannot appropriately be tested and marked in accordance with the provisions of these Rules, and that it has been tested and marked in an appropriate manner they may exempt that anchor or chain cable, or class of anchors or chain cables, from compliance with all or any of those provisions.

F. V. Corfield, Minister of State, Board of Trade.

1st October 1970.

Rule 6. SCHEDULE 1
Proof Loads for Anchors

						,	,				
Weight of Anchor	Proof Load	Weight of Anchor	Proof Load								
Kg.	TONNE	Kg.	TONNE								
76	3.33	700	15.20	2300	39.60	4700	65·10	7200	82.60	15000	117-70
80	3.46	750	16.10	2400	40.90	4800	65.80	7400	83.80	15500	119-50
90	3.70	800	16.90	2500	42.20	4900	66.60	7600	85.00	16000	120.90
100	3.99	850	17.80	2600	43.50	5000	67.40	7800	86·10	16500	122-20
120	4.52	900	18.60	2700	44.70	5100	68.20	8000	87.00	17000	123-50
140	5.00	950	19.50	2800	45.90	5200	69.00	8200	88-10	17500	124-70
160	5.43	1000	20.30	2900	47·10	5300	69.80	8400	89:20	18000	125-90
180	5.85	1050	21.20	3000	48.30	5400	70.50	8600	90.30	18500	127.00
200	6.25	1100	22.00	3100	49.40	5500	71.30	8800	91.40	19000	128-00
225	6.71	1150	22.80	3200	50.50	5600	72.00	9000	92.40	19500	129.00
250	7.18	1200	23.60	3300	51.60	5700	72.70	9200	93.40	20000	130.00
275	7.64	1250	24.40	3400	52.70	5800	73.50	9400	94.40	21000	131.00
300	8.11	1300	25.20	3500	53.80	5900	74-20	9600	95.30	22000	132.00
325	8.58	1350	26.00	3600	54.80	6000	74.90	9800	96.20	23000	133.00
350	9.05	1400	26.70	3700	55.80	6100	75.50	10000	97·10	24000	134.00
375	9.52	1450	27.50	3800	56.80	6200	76.20	10500	99-30	25000	135.00
400	9.98	1500	28.30	3900	57.80	6300	76.90	11000	101.50	26000	136.00
425	10.50	1600	29.80	4000	58.80	6400	77.50	11500	103-60	27000	137.00
450	10.90	1700	31.30	4100	59-80	6500	78-20	12000	105.70	28000	138-00
475	11.40	1800	32.70	4200	60.70	6600	78-80	12500	107-80	29000	139-00
500	11.80	1900	34-20	4300	61.60	6700	79.40	13000	109-90	30000	140.00
550	12.70	2000	35.60	4400	62.50	6800	80-10	13500	111-90	31000	141.00
600	13.50	2100	36.90	4500	63·40	6900	80.70	14000	113-90	· · · · · · · · · · · · · · · · · · ·	
650	14.30	2200	38.30	4600	64.30	7000	81-30	14500	115-90		

Proof loads for intermediate weights shall be obtained by linear interpolation.

# SCHEDULE 2

# GRADES OF CHAIN CABLES (AND ACCESSORIES)

Chain Cables (and Accessories) shall be graded for the purposes of these Rules in accordance with the following:—  $\,$ 

Material	Method of Manufacture	Tensile Range Kg/mm²	Elongation (on 5D) Minimum	Reduction in Area at Fracture Minimum %	Charpy V Notch Impact Test Minimum Value	Maximum Diameter of Former 180° Bend Test
Wrought Iron	Fire welded	31–41	30		_	1T
Mild Steel	Fire welded	31–41	30	_	_	1T
Mild Steel	Flash-butt welded	31–41	30	_	_	1T
Mild Steel	Flash-butt welded	41–50	25			2T
Steel	Flash-butt welded or drop forged	50–65	22	_		3Т
Steel	Cast	50 min	22	—	_	3T
Steel	Flash-butt welded or drop forged	70 min	17	40	*5 kg m (or	
Steel	Cast	70 min	17	35	49.0 Nm) at 0°C.	
	Wrought Iron Mild Steel Mild Steel Mild Steel Steel Steel	Material Manufacture  Wrought Iron Fire welded Fire welded Flash-butt welded Flash-butt welded Steel Flash-butt welded or drop forged Steel Flash-butt welded or drop forged Flash-butt welded from the forged Steel Flash-butt welded from drop forged for drop forged	Material Method of Manufacture Range Kg/mm²  Wrought Iron Fire welded 31-41 Mild Steel Fire welded 31-41 Mild Steel Flash-butt welded 41-50  Steel Flash-butt welded or drop forged  Steel Cast 50 min  Steel Flash-butt welded 70 min or drop forged	Material  Method of Manufacture  Minufacture  Minufacture  Minufacture  Fire welded  31–41  30  31–41  30  Mild Steel  Flash-butt welded  41–50  25  Steel  Flash-butt welded or drop forged  Steel  Cast  Steel  Flash-butt welded or drop forged  To min  To minufacture  Minufacture  Steel  Flash-butt welded or drop forged  To min  To minufacture  Method of Manufacture  Steel  All 30  Steel  Flash-butt welded or drop forged  To min  To minufacture  Method of Manufacture  Steel  To minufacture  Minimum  Method of Manufacture  Steel  To minufacture  To minu	Material     Method of Manufacture     Tensile Range Kg/mm²     Elongation (on 5D) Minimum %     Area at Fracture Minimum %       Wrought Iron Mild Steel     Fire welded     31–41     30     —       Mild Steel     Flash-butt welded     31–41     30     —       Mild Steel     Flash-butt welded     31–41     30     —       Mild Steel     Flash-butt welded     41–50     25     —       Steel     Flash-butt welded or drop forged     50–65     22     —       Steel     Flash-butt welded or drop forged     70 min     17     40	Material         Method of Manufacture         Tensile Range Rg/mm²         Elongation (on 5D) Minimum %         Area at Fracture Minimum %         Notch Impact Test Test Minimum %           Wrought Iron Mild Steel         Fire welded         31-41         30         —         —           Mild Steel         Fire welded         31-41         30         —         —           Mild Steel         Flash-butt welded         31-41         30         —         —           Mild Steel         Flash-butt welded or drop forged         41-50         25         —         —           Steel         Flash-butt welded or drop forged         50-65         22         —         —           Steel         Flash-butt welded or drop forged         70 min         17         40         *5 kg m (or 490 Nm) at 0 °C.

<sup>\*</sup>Average value from three test specimens.

Notes:—(1) D is the diameter of the tensile test piece.

- (2) T is the diameter or thickness of the bend test piece.
- (3) For the purposes of this Schedule 1 Kg/mm<sup>2</sup>=0.98 h bars or 9.8 MN/m<sup>2</sup>.

Rule 7.

SCHEDULE 3

Number of Tensile Breaking Load Tests for Chain Cables

Grade	Method of Manufacture	Number of Breaking Tests		
1(a) 1(b)	Fire welded	One per length		
1(c) and (d) 2(a) 3(a)	Flash-butt welded, or drop forged, and heat treated	One per four lengths		
1(c) and (d)	Flash-butt welded but not heat treated	One per length		
2( <i>b</i> ) 3( <i>b</i> )	Cast and heat treated	One per heat treatment batch with a minimum of one per four lengths		

Rule 7
SCHEDULE 4
Test Loads for Open Link or Short Link, and Stud Link Chain Cables
OPEN OR SHORT LINK CHAIN CABLE

CHAIN DIAMETER	GRAI	DE 1	GRADE 2		
	Tensile Proof Load	Tensile Breaking Load	Tensile Proof Load	Tensile Breaking Load	
mm	Tonne	Tonne	Tonne	Tonne	
12·5 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	3·00 3·20 3·65 4·20 4·80 5·45 6·10 6·80 7·55 8·30 9·10 9·95 10·90 11·80 12·80 13·70 14·80 15·90 17·00 18·20 19·40 20·60 21·80 23·10 24·50 25·90 27·30 28·80 30·20 31·70 33·30 34·90 36·60 38·30 39·90 41·70 43·50 45·40 45·40 45·40	5.90 6.40 7.30 8.40 9.60 10.90 12.20 13.60 15.10 16.60 18.20 19.90 21.70 23.60 25.50 27.40 29.50 31.70 34.00 36.30 38.70 41.10 43.60 46.20 48.90 51.70 54.60 57.50 60.40 63.40 66.60 69.80 73.20 76.50 79.90 83.40 87.00 90.70	4·20 4·50 5·20 5·95 6·75 7·65 8·60 9·55 10·60 11·70 12·80 14·00 15·30 16·60 17·90 19·30 20·80 22·30 23·90 25·50 27·10 28·90 30·60 32·40 34·30 36·30 36·30 36·30 44·50 46·70 49·00 51·30 55·60 56·00 58·20 61·00 63·50	8·30 9·00 10·40 11·90 13·50 15·30 17·20 19·10 21·20 23·40 25·60 28·00 30·50 33·10 35·80 38·50 41·50 44·50 44·50 44·50 68·60 72·50 76·40 80·50 84·60 89·00 93·40 97·90 102·00 117·00 112·00 112·00 112·00 122·00	
49 50 51					

STUD LINK CHAIN CABLE								
CHAIN DIAMETER	GRA	DE 1	GRA	DE 2	GRADE 3			
DIAMETER	Tensile Proof Load	Tensile Breaking Load	Tensile Proof Load	Tensile Breaking Load	Tensile Proof Load	Tensile Breaking Load		
mm	Tonne	Tonne	Tonne	Tonne	Tonne	Tonne		
12.5	4.7	6.7	6.7	9.4	9.4	13.5		
14	5.9	8-4	8∙4	11.8	11.8	16.8		
16	7.7	10.9	10.9	15.3	15.3	22.0		
17.5	9.1	13.0	13.0	18.3	18.3	26.1		
19	10.7	15.3	15.3	21.5	21.5	30.7		
20.5	12.5	17.8	17.8	24.9	24.9	35.6		
22	14.3	20.4	20.4	28.6	28.6	40.9		
24	17.0	24.2	24.2	33.9	33.9	48.5		
26	19.8	28.3	28.3	39.7	39.7	56.7		
28	22.9	32.7	32.7	45·8	45·8	65.5		
30	26.2	37.5	37.5	52·4	52·4	74.9		
32	29.7	42.5	42.5	59.4	59·4 66·8	84.9		
34 36	33·4 37·3	47·7 53·3	47·7 53·3	66·8 74·6	74·6	95·5 107·0		
38	37·3 41·4	59·2	59·2	82.8	82·8	118.0		
40	45.7	65.3	65.3	91.4	91.4	131.0		
42	50.2	71.7	71.7	100.0	100.0	143.0		
44	54·9	78.4	78.4	110.0	110.0	157.0		
46	59.7	85.3	85.3	119.0	119.0	171.0		
48	64.8	92.6	92.6	130.0	130.0	185.0		
50	70.0	100.0	100.0	140.0	140.0	200.0		
52	75.4	108.0	108∙0	151.0	151.0	215.0		
54	81.0	116.0	116.0	162.0	162.0	231.0		
56	86.8	124.0	124.0	174.0	174.0	248.0		
58	92.7	132.0	132.0	185·0 198·0	185∙0 198∙0	265·0 282·0		
60 62	98·8 105·0	141·0 150·0	141·0 150·0	210.0	210.0	300.0		
64	112.0	159.0	159.0	223.0	223.0	319.0		
66	112.0	169.0	169.0	236.0	236.0	337.0		
68	125.0	178.0	178.0	250.0	250.0	357.0		
70	132.0	188.0	188.0	263.0	263.0	376.0		
73	142.0	203.0	203.0	285.0	285.0	407.0		
76	153.0	219.0	219.0	307∙0	307.0	438∙0		
78	161.0	230.0	230.0	322.0	322.0	459∙0		
81	172.0	246.0	246.0	345.0	345.0	492.0		
84	184.0	263.0	263.0	368.0	368.0	526.0		
87	196.0	280.0	280.0	393.0	393.0	561.0		
90	209.0	298.0	298.0	417.0	417.0	596.0		
92	217.0	310.0	310.0	434.0	434.0	620·0 657·0		
95	230.0	329.0	329·0	460·0 477·0	460·0 477·0			
97 100	239·0 252·0	341·0 360·0	341·0 360·0	504.0	504·0	682·0 720·0		
102	261.0	373·0	373·0	522.0	522.0	746.0		
102	275.0	393.0	393.0	550.0	550·0	785·0		
103	284.0	406·0	406·0	568.0	568.0	812.0		
111	303.0	433.0	433.0	606.0	606.0	865.0		
114	317.0	453.0	453.0	635.0	635.0	907.0		
117	332.0	474.0	474.0	664.0	664.0	948.0		
120	347.0	495.0	495.0	694.0	694.0	991.0		
122	357.0	510.0	510.0	714.0	714.0	1,019.0		
·	•	•						

STUD LINK CHAIN CABLE (contd.)

mm	Tonne	Tonne	Tonne	Tonne	Tonne	Tonne
124	367·0	524·0	524·0	734·0	734·0	1,048·0
127	382·0	546·0	546·0	764·0	764·0	1,092·0
130	398·0	568·0	568·0	795·0	795·0	1,136·0
132	408·0	583·0	583·0	816·0	816·0	1,165·0
137	434·0	620·0	620·0	868·0	868·0	1,240·0
142	461·0	658·0	658·0	921·0	921·0	1,316·0
147	488·0	697·0	697·0	975·0	975·0	1,393·0
152	515·0	736·0	736·0	1,030·0	1,030·0	1,471·0

Tensile proof loads and tensile breaking loads for intermediate chain diameters shall be obtained by linear interpolation.

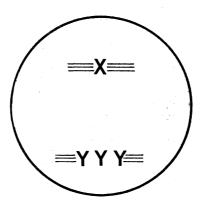
Rule 9.

# SCHEDULE 5

Marking

Part I MARK FOR ANCHORS

Fig. 1

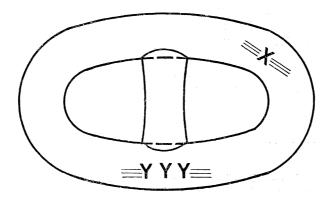


- X Number of Certificate Y Letters indicating Certifying Authority

# Part 2

### MARK FOR CHAIN CABLES

Fig. 2



- X Number of Certificate Y Letters indicating Certifying Authority

### Rule 10.

### SCHEDULE 6

### CERTIFICATES

All certificates referred to in Rule 10 shall be signed on behalf of the Certifying Authority and shall show:-

A serial number

Name of Certifying Authority

Mark of Certifying Authority

Name of testing establishment

Mark of testing establishment (if any)

Name of Supervisor of Tests.

The following information shall also be shown in respect of the appropriate certificate.

# ANCHOR CERTIFICATE

Type of anchor

Weight (excluding stock) in kilogrammes

Weight of stock in kilogrammes

Length of shank in millimetres

Length of arm in millimetres

Diameter of trend in millimetres

Proof load applied in tonnes

### CHAIN CABLE CERTIFICATE

Type of cable
Grade
Diameter in millimetres
Total length in metres
Total weight in kilogrammes
Length of link in millimetres
Breadth of link in millimetres
Tensile breaking load applied in tonnes
Tensile proof load applied in tonnes
Number and types of accessories included

# CHAIN CABLE ACCESSORY CERTIFICATE

Type of accessory
Quantity
Total weight in kilogrammes
Tensile breaking load applied in tonnes
Tensile proof load applied in tonnes

# EXPLANATORY NOTE

(This Note is not part of the Rules.)

These Rules, made by the Board of Trade under section 1 of the Anchors and Chain Cables Act 1967, prescribe requirements for the testing and marking of anchors and chain cables for use in ships registered in the United Kingdom. Requirements on these matters were formerly contained in the Anchors and Chain Cables Act 1899, which the 1967 Act repealed.

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