

**PARTE II RULE FOR THE CONSTRUCTION
AND CLASSIFICATION OF SHIPS
IDENTIFIED BY THEIR MISSION**

TÍTULO 41 FISHING VESSEL

SEÇÃO 3 HULL EQUIPMENT

CHAPTERS

- A SCOPE
- B DOCUMENTS, REGULATIONS AND
 STANDARDS
- C MATERIALS AND MANLABOUR
 - **See Title 11**
- D SPECIFIC SYSTEM REQUIREMENTS
- T TEST AND INSPECTIONS

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CHAPTER A SCOPE

CHAPTER CONTENTS

- A1. APPLICATION
- A2. DEFINITIONS

A1. APPLICATION

100. Nature of the systems

101. This Section applies to hull equipment of fishing vessel covered by the present Title 41, in addition to the requirements of Part II, Title 11, Section 3.

A2. DEFINITIONS

100. Terms

101. In addition of the terms defined in Part II, Title 11, Section 3, the following definition apply:

Fishing winch: winch to drive ropes for fishing gear or to handle fishing nets.

CHAPTER B DOCUMENTS, REGULATIONS AND STANDARDS

CHAPTER CONTENTS

- B1. DOCUMENTS TO THE RBNA
- B2. REGULATION
- B3. STANDARDS - See Part II, Title 11, Section 3

B1. DOCUMENTS TO THE RBNA

100. Fishing gear and devices

101. In addition to the documents required by Part II, Title 11, Section 3, to be presented the equipment drawings and specifications with their fixation on the ship structure.

200. a 700. See Title 11.

B2. REGULATION

100. Application

- 101. Refer to NORMAM 01.

CHAPTER D REQUIREMENTS OF THE SYSTEMS

CHAPTER CONTENTS

- D1. FISHING GEAR
- D2. ANCHORING, MOORING AND TOWING
- D3. SYSTEM OF MANEUVER
- See Part II, Title 11, Section 3
- D4. EQUIPMENT OF SALVAGE
- See Part II, Title 11, Section 3
- D5. FIREFIGHTING EQUIPMENT
- See Part II, Title 11, Section 3
- D6. HULL OPENINGS: MEANS OF PROTECTION AND CLOSURE
- See Part II, Title 11, Section 3
- D7. HULL EQUIPMENT AND APPENDAGES - See Part II, Title 11, Section 3

D1. FISHING GEAR

100. Application

101. This Subchapter applies to fishing gear and devices on board.

102. Fishing winches shall be certified or have type approval by the RBNA.

200. Calculation hypotheses

201. The stresses in the various components, calculated for the test loads, as per Subchapter T1., shall not exceed the values:

$$\sigma_c = \sqrt{\sigma^2 + 3 \times \tau^2} \leq 15,7 \text{ daN/mm}^2$$

$$(16 \text{ kgf/mm}^2)$$

where

$$\sigma \leq 0,72 \times \sigma_y$$

$$\tau \leq 0,48 \times \sigma_y$$

σ_y is the yield stress

300. Fishing winch

301. The pulling capacities for the several layers of the drum are to be specified, as well as the towline storage capability, by diameter.

402. The design speed shall be 9 m/min, except in special cases.

400. Gantries and masts

401. Tension in the several components shall be calculated based on 1,5 times the design load and are not to exceed the following stress levels:

$$\sigma_c = \sqrt{\sigma^2 + 3 \times \tau^2} \leq 12,8 \text{ daN/mm}^2$$

(13 kgf/mm²)

where:

$$\sigma \leq 0,60 \times \sigma_y$$

$$\tau \leq 0,40 \times \sigma_y$$

σ_y is the yield stress

D2. ANCHORING, MOORING AND TOWING

100. Application

101. The present Subchapter D2. applies to the fishing vessels operating in unrestricted service.

200. General requirements

201. Each vessel is to be provided with anchoring equipment designed for quick and safe operation in all foreseeable service conditions. Anchor equipment should consist of anchors, anchor chain cables and a windlass or other arrangements for dropping and weighing the anchors for holding the ship at anchor.

202. The equipment of anchors and chain cables given in the following Table T.D2.202.1. is based on an "Equipment Number" which is to be calculated according to Part II, Title 11, Section 3, Sub-Chapter D2.

300. Particular requirements

301. For vessels below 30 m in length the anchor chain may be replaced with wire ropes of equal strength of the tabular anchor cables of Grade 1.

302. For vessels of length between 30 m and 40 m the chain cable of one anchoring line may be replaced with wire ropes of equal strength of the tabular chain cables of Grade 1 provided normal chain cable is maintained for the second line.

303. Wire ropes of trawl winches complying with this requirement may be used as anchor chain cables.

304. When wire ropes are substituted for anchor chain cables then:

- a. the length of the ropes is to be equal to 1,5 times the corresponding tabular length of chain cable.
- b. a short length of chain cable is to be provided between anchor and wire rope having a length of 12.5 m or the distance between anchor in stowed position and winch, whichever is less.

305. A "High Holding Power Anchor" of approved design may be used as bower anchors, the mass of each such anchor may be 75 percent of the Table mass for ordinary stockless bower anchors.

306. The Table anchor equipment may be increased for vessels fishing in very rough waters.

TABLE T.D2.201.1 – EQUIPMENT

Equipment Number		Stockless Bower Anchors	Stud Link Chain Cables for Bower Anchors			
Exceeding	Not Exceeding	Number	Mass per Anchor (kg)	Total Length (m)	Diameter (mm)	
1	2				3	4
30	40	2	80	165	11	–
40	50	2	100	192.5	11	–
50	60	2	120	192.5	12.5	–
60	70	2	140	192.5	12.5	–
70	80	2	160	220	14	12.5
80	90	2	180	220	14	12.5
90	100	2	210	220	16	14
100	110	2	240	220	16	14
110	120	2	270	247.5	17.5	16
120	130	2	300	247.5	17.5	16
130	140	2	340	275	19	17.5
140	150	2	390	275	19	17.5

Equipment Number		Stockless Bower Anchors	Stud Link Chain Cables for Bower Anchors			
Exceeding	Not Exceeding	Number	Mass per Anchor (kg)	Total Length (m)	Diameter (mm)	
1	2				3	4
150	175	2	480	275	22	19
175	205	2	570	302.5	24	20.5
205	240	2	660	302.5	26	22
240	280	2	780	330	28	24
280	320	2	900	357.5	30	26
320	360	2	1020	357.5	32	28
360	400	2	1140	385	34	30
400	450	2	1290	385	36	32
450	500	2	1440	412.5	38	34
500	550	2	1590	412.5	40	34
550	600	2	1740	440	42	36
600	660	2	1920	440	44	38
660	720	2	2100	440	46	40

NOTES

* In alternative to stud link chain cables, short link chain cables may be considered, for acceptance, by the concerned Society on the basis of their design, strength and steel quality.

** The steel grades of the chain cables are covered by A1.

Equipment Number			Mooring Lines		
exceeding	not exceeding	Number	Minimum Length of each line (m)	Minimum breaking strength (kN)	
1	2	3	4	5	
				5a	5b*
30	40	2	50	29	29,4
40	50	2	60	29	29,4
50	60	2	60	29	29,4
60	70	2	80	29	29,4
70	80	2	100	34	34,3
80	90	2	100	37	36,8
90	100	2	110	37	36,8
100	110	2	110	39	39,2
110	120	2	110	39	39,2
120	130	2	110	44	44,1
130	140	2	120	44	44,1
140	150	2	120	49	–
150	175	2	120	54	–
175	205	2	120	59	–
205	240	2	120	64	64,2
240	280	3	120	71	71,1
280	320	3	140	78	78,4
320	360	3	140	86	85,8
360	400	3	140	93	93,2
400	450	3	140	101	–
450	500	3	140	108	–
500	550	4	160	113	–
550	600	4	160	118	–
600	660	4	160	123	–
660	720	4	160	127	–

* The values of the column 5b may be adopted in alternative to the correspondent values of the column 5a.

CHAPTER T INSPECTIONS AND TESTS

CHAPTER CONTENTS

T1. FISHING GEAR

T2. ANCHORING, MOORING AND TOWING
-See Part II, Title 11, Section 3

T3. MANOEUVERING SYSTEM
-See Part II, Title 11, Section 3

T4. SALVAGE EQUIPMENT
-See Part II, Title 11, Section 3

T5. FIREFIGHTING EQUIPMENT
-See Part II, Title 11, Section 3

T6. HULL OPENINGS-
-See Part II, Title 11, Section 3

T7. PROTECTION AND CLOSING
-See Part II, Title 11, Section 3

T8. HULL EQUIPMENT AND APPENDAGES
-See Part II, Title 11, Section 3

T1. FISHING GEAR

100. Fishing winch

101. To be tested with 1,5 times the project load.

200. Fishing devices, rigging and pieces

201. To be tested individually on operational conditions with 1,5 times the project load.

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