



Design Appraisal Document

Lloyd's Register EMEA
UK&I Technical Support Office
Global Technology Centres
Boldrewood Innovation Campus
Southampton
SO16 7QF

Date
22 September 2021

Please quote this reference number on all future communications
GTC/ENG/KK/WP44279597

MACHINERY GENERAL DESIGN APPRAISAL

**Vetus-Maxwell RC12HD
Anchor Windlass**

Valid Until 15 November 2026

This Design Appraisal Document cancels and supersedes Document No. ENG 25702637, Issue No.0, dated 16th November 2016

1. The plans listed in the appendix have been examined for compliance with Lloyd's Register's Rules and Regulations for the Classification of Special Service Craft 2021, Part 3, Chapter 5 and are assigned an appraisal status as indicated subject to the following conditions.
2. Machinery

Manufacturer	Vetus-Maxwell APAC Ltd
Type Designation	Anchor Windlass RC12HD

3. Details

Equipment	RC12HD-12.5(13.0)
Nominal Pull, at 9.0 metres/min, N	4453
Maximum Pull, N	6680
Chain Diameter/ Grade, mm	12.5(13.0) mm/U1
With chain stopper?	Yes
Brake Holding Power (N)	19620 N
Minimum Input Power, kW	0.8
Motor Type	Electrohydraulic

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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4. Conditions of Approval

- 4.1 The construction and testing is to be carried out under survey, including on-board tests, to Lloyd's Register's Rules and Regulations for the Classification of Special Service Craft 2021 Part 3, Chapter 5, Section 8 of the Rules, to the satisfaction of the attending LR Surveyor.
- 4.2 The windlass braking system is to have sufficient brake capacity to ensure safe stopping when paying out the anchor and chain.
- 4.3 It is the master's responsibility to ensure that the chain stopper is in use when riding at anchor
- 4.4 The chain stopper is always to be used whilst riding at anchor

5. General Comments

- 5.1 The contents of this document relate to the anchor handling equipment only and do not cover items shown as shipyard supply.



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1. The documents listed below have been examined

Document No.	Rev.	Title	Status	Date
7447	2	Lower Chain Wheel 10mm_RC_12_Machined	SI	16 November 2016
7448	2	Upper Chain Wheel 10mm_RC_12_Machined	SI	16 November 2016
7451	4	Lower Chain Wheel 12mm_RC_12_Machined	SI	16 November 2016
7452	3	Upper Chain Wheel 12mm_RC_12_Machined	SI	16 November 2016
7439	2	Clutch Cone_RC12_Machined	A	16 November 2016
7441	3	Clutch Nut_RC12_Machined	A	16 November 2016
7465	1	Key 3/8" x 3/8" x 20mm	SI	16 November 2016
4635	3	Key Gearbox	A	16 November 2016
7951	1	Main Shaft RC12HD Low Profile 100TDC	A	16 November 2016
7952	1	Main Shaft RC12HD Low Profile 100TDC	A	16 November 2016
7953	1	Main Shaft RC12HD Low Profile 200TDC	A	16 November 2016
7954	1	Main Shaft RC12HD Capstan 200TDC	A	16 November 2016
5497	4	Spacer Tube_RC12_Bonfig W 75	A	16 November 2016
3169R	2	Spacer Tube Casting	A	16 November 2016
7955	1	Spacer Tube RC12HD 200TDC Machined	A	16 November 2016
3204R	2	Space Tube Casting for 8" Deck Clearance	A	16 November 2016
7430	3	Deck Plate_RC12_Machined	A	16 November 2016
7431	1	Deckplate_RC12_ACW_Machined	A	16 November 2016

2. The documents listed below have been considered together with the submitted documents in the appraisal

Document No.	Rev.	Title
		Calculation Sheet
Page 4 of 47		Windlass Parts
Page 6 of 47		Bottom works
Page 8 of 47		RC12HD Load Path
W-75-WR 75		Gearbox Data Sheet
30341		Motor Electric Characteristic
		Hyd Motor Data Sheet
		AC motor data sheet
		Braking calculations – 12HD –LR SSC
		E-mail Correspondence from Maxwell to LR, From 18 May to 10 November 2016

Appraisal Status Key

- A Approved - provided the arrangements are to the surveyor's satisfaction
SI Retained as supporting documentation for information only

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