



# Marine Design Appraisal Document

Lloyd's Register EMEA  
Marine Engineering and Technology Service  
Global Technology Centre  
Boldrewood Innovation Campus  
Southampton  
SO16 7QF

Date  
**16 November 2016**

Please quote the document number on all future communications

## MACHINERY GENERAL DESIGN APPRAISAL

Vetus-Maxwell RC12HD  
Anchor Windlass

Valid Until 15th November 2021

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 2016, 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	6120
Maximum Pull, N	9180
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	Electro Hydraulic

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 2016 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 to be used at all times 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.

16 Nov 2016  
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## Appendix

1. The documents listed below have been examined

Drawing Number	Revision	Title	Appraisal Status
7447	2	Lower Chain Wheel 10mm_RC_12_Machined	SI
7448	2	Upper Chain Wheel 10mm_RC_12_Machined	SI
7451	4	Lower Chain Wheel 12mm_RC_12_Machined	SI
7452	3	Upper Chain Wheel 12mm_RC_12_Machined	SI
7439	2	Clutch Cone_RC12_Machined	A
7441	3	Clutch Nut_RC12_Machined	A
7465	1	Key 3/8" x 3/8" x 20mm	SI
4635	3	Key Gearbox	A
7951	1	Main Shaft RC12HD Low Profile 100TDC	A
7952	1	Main Shaft RC12HD Low Profile 100TDC	A
7953	1	Main Shaft RC12HD Low Profile 200TDC	A
7954	1	Main Shaft RC12HD Capstan 200TDC	A
5497	4	Spacer Tube_RC12_Bonfig W 75	A
3169R	2	Spacer Tube Casting	A
7955	1	Spacer Tube RC12HD 200TDC Machined	A
3204R	2	Space Tube Casting for 8" Deck Clearance	A
7430	3	Deck Plate_RC12_Machined	A
7431	1	Deckplate_RC12_ACW_Machined	A

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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