



Marine & Offshore

Certificate number: 13120/D0 BV

File number: APG 199/0

Product code: 6549I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Kobelt Manufacturing Co. Ltd.

Surrey (BC) - CANADA

for the type of product

STEERING GEAR MISCELLANEOUS COMPONENTS

Steering Cylinders: 25, 35 & 45 Series.

Helm Pump: 7003,7004,7005,7012,7031.

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 03 Jul 2023

For Bureau Veritas Marine & Offshore,

At BV PORT EVERGLADES CENTRE, on 14 Dec 2018,

Flavio Rosas



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

1.1 - HYDRAULIC STEERING CYLINDERS

Steering hydraulic cylinders intended to be hand or power operated.

Hydraulic cylinders rating:

MODEL	Maximum working pressure (bar)	Cylinder bore (mm)	Stroke (mm)
2510	110	63.5	254.00 (10")
2512	110	63.5	304.80 (12")
2514	110	63.5	355.60 (14")
3512	110	88.9	304.80 (12")
3515	110	88.9	381.00 (15")
3518	110	88.9	457.20 (18")
4516	110	114.3	406.40 (16")
4520	110	114.3	508.00 (20")
4524	110	114.3	609.60 (24")

1.2 - HELM PUMPS

Helm pump are hydraulic variable or fixed displacement, manually operated.

Maximum working pressure 69 bar.

Helm Pump rating:

MODEL	Minimum & Maximum Delivery in ³ per turn	Observation
7003	1 to 3	Variable displacement
7005	2 to 6	
7012	4 to 12	
7004	3.4 & 4.5	Fixed displacement
7031	2 & 2.6	

1.3 - MISCELLANEOUS COMPONENTS

7002 Header tank

7020 Safety and bypass valve

7143 Non-drain back valve

7144 Single solenoid adaptator base

7145 Dual solenoid adaptator base

7146 Autopilot and Jog lever interface

7148 Power follow-up

2. DOCUMENTS AND DRAWINGS:

MODEL	Designation	Drawing number	Material		
STEERING CYLINDER			Cylinder tubes	End Cap & Rod end	Piston Rod
25 Serie	GA	7802-0003 Rev B	C1026	C1045	C1045
2510	Cylinder	7800-0028 Rev A			
2512	Cylinder	7800-0030 Rev A			
2514	Cylinder	7800-0032 Rev A			
35 Serie	GA	7802-0001 Rev B	C1026	C1045	C1045
3512	Cylinder	7800-0006 Rev A			
3515	Cylinder	7800-0008 Rev A			
3518	Cylinder	7800-0010 Rev A			
45 Serie	GA	7802-0002 Rev B	C1026	C1045	C1045
4516	Cylinder	7800-0017 Rev A			
4520	Cylinder	7800-0019 Rev A			
4524	Cylinder	7800-0021 Rev A			
HELM PUMP			Housing & Rotor	Piston & pintol	Shaft
7003	Helm pump 1-3 in3	D7003 Rev A	Bronze	Hardened Steel	SS303
7005	Helm pump 2-6 in3	D7005 Rev B			
7012	Helm pump 4-12 in3	D7012 Rev C			
7004	Helm pump 3.4&4.5in3	D-7004 Rev F			
7031	Helm pump 2 & 2.6 in3	C7031 Rev B			

3. TEST REPORTS:

Test as per Intertek or Powertech testing service reports:

MODEL	Test report
HELM PUMP	
7003	473-5610
7005	
7012	
7004	
7031	

4. APPLICATION / LIMITATION:

- These above components may be used for steering gear of BV classed vessels.
- The steering gear installation drawings should be submitted for each application.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **Kobelt Manufacturing Co. Ltd.** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - Hydraulic jacks are to be individually tested at works and delivered with their socket bearing.

5.5 - Cylinders and piston axis are to be supplied with at least a 3-1-B certificate as per EN 10204 Standard.

5.6 - For information, **Kobelt Manufacturing Co. Ltd.** has declared to Bureau Veritas the following production site(s):

Kobelt Manufacturing Co. Ltd.

8238 129th Street
V3W 0A6 Surrey (BC)
CANADA

6. MARKING OF PRODUCT:

Each component is to be marked as applicable with at least.

- Name of manufacturer
- Type
- Maximum working pressure
- Test pressure / date of test
- BV marks.

7. OTHERS:

7.1 - It is **Kobelc Manufacturing Co. Ltd.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate N° 13120/C0 BV issued on 28 May 2014 by the Society.

***** END OF CERTIFICATE *****