

ISO 11606:2022-02 (E)

Ships and marine technology - Marine electromagnetic compasses

Contents

Page

Foreword	v	
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Composition	2
5	Construction and material	2
5.1	Requirements.....	2
5.2	Electrical wiring.....	2
5.3	Non-magnetic housing.....	2
5.4	Fore-and-aft marks.....	2
5.5	Graduation.....	2
5.5.1	Graduation of main compass card.....	2
5.5.2	Indication of the repeater indicator.....	3
5.5.3	Centre of the graduation.....	3
5.5.4	Graduation of the verge ring.....	3
5.5.5	Accuracy of fore-and-aft marks.....	3
5.5.6	Readability of the graduation.....	3
5.5.7	Horizontal position of the compass plane.....	3
5.6	Lubber marks.....	3
5.6.1	General.....	3
5.6.2	Accuracy.....	3
5.7	Illumination.....	4
5.8	Compensation of deviation and heeling error.....	4
5.8.1	General.....	4
5.8.2	Indication of compensation.....	4
5.8.3	Protection of compensation.....	4
5.9	Heading output.....	4
5.10	Outputs to other equipment.....	4
5.11	Gimbals.....	5
5.11.1	Direction of gimbal axes.....	5
5.11.2	Angle between the gimbal axes.....	5
5.11.3	Freedom of tilt of the main compass.....	5
5.11.4	Precaution against dislodging of the main compass and the repeater indicators.....	5
5.12	Fitting the main compass.....	5
5.13	Height of the compass card plane.....	5
5.14	Watertightness of repeater indicators.....	5
5.15	Azimuth reading devices.....	5
5.15.1	Provision of azimuth reading devices.....	5
5.15.2	Azimuth sight.....	5
5.16	Construction for maintenance and inspection.....	5
5.17	Protection against changes in power supply.....	6
6	Performance	6
6.1	Preconditions.....	6
6.2	Accuracy of heading.....	6
6.2.1	Static accuracy.....	6
6.2.2	Dynamic accuracy.....	6

6.3	Follow-up accuracy of the transmission system.....	6
6.4	Synchronized accuracy between a repeater indicator and the main compass.....	6
6.5	Possibility of compensating the coefficients.....	6
6.6	Electromagnetic compatibility.....	6
7	Precautions against failure.....	7
7.1	Power supply.....	7
7.2	Backup of compensator data.....	7
7.3	Failure alarm.....	7
8	Marking.....	7
9	Type testing and individual testing.....	7
9.1	General.....	7
9.2	Type testing.....	7
9.3	Individual testing.....	7
10	Certification.....	8
10.1	Test certification.....	8
10.2	Statement issued by or on behalf of the manufacturer.....	8
10.3	Marking check.....	8
10.4	Sample checks.....	8
11	Testing.....	8
11.1	Testing of units.....	8
11.1.1	General.....	8
11.1.2	Condition of the compass.....	9
11.1.3	Non-magnetic properties (type test only).....	9
11.1.4	Graduation of the main compass card.....	9
11.1.5	Fore-and-aft marks of the main compass.....	9
11.1.6	Azimuth error of the main compass.....	9
11.1.7	Graduation of the card of card-type repeater indicators.....	9
11.1.8	Graduation of the verge ring.....	9
11.1.9	Readability.....	9
11.1.10	Horizontal position of compass plane.....	9
11.1.11	Lubber marks.....	10
11.1.12	Illumination and dimmer systems.....	10
11.1.13	Indication of compensation values.....	10
11.1.14	Examination of the output.....	10
11.1.15	Direction of gimbals axis and angle between the gimbals axes.....	10
11.1.16	Freedom of tilt of the main compass.....	11
11.1.17	Precautions against dislodging.....	11
11.1.18	Fitting the main compass.....	11
11.1.19	Height of the main compass card plane.....	11
11.1.20	Watertightness of repeater indicators.....	11
11.1.21	Provision of azimuth reading device.....	11
11.1.22	Azimuth sight.....	11
11.1.23	Construction for maintenance and inspection.....	11
11.1.24	Protection against changes in power supply.....	11
11.2	Performance tests.....	11
11.2.1	Freedom of tilt of the compasses.....	11
11.2.2	Accuracy of the fore-and-aft marks of the main compass.....	12
11.2.3	Accuracy of the main lubber mark.....	12
11.2.4	Accuracy of the compass.....	12
11.2.5	Directional error in the horizontal plane.....	12
11.2.6	Bearing accuracy under the influence of ship's motion.....	12
11.2.7	Transmission system.....	12
11.2.8	Synchronized accuracy between a repeater indicator and the main compass.....	12
11.2.9	Environmental conditions.....	12
11.2.10	Test of compensation ability.....	12
11.3	Test of electromagnetic compatibility.....	13
11.4	Checking of precaution against failure.....	13
12	Designation.....	13
	Bibliography.....	14