

DIN EN 14744:2006-01 (E)

Inland navigation vessels and sea-going vessels - Navigation light

Contents		Page
Foreword		4
1	Scope	5
2	Normative references	5
3	Terms, definitions and abbreviations	5
4	Minimum requirements	7
4.1	Luminous intensity and range	7
4.1.1	General	7
4.1.2	COLREGs	7
4.1.3	CCNR and CEVNI	7
4.2	Luminous intensity distribution	8
4.2.1	Horizontal luminous intensity distribution	8
4.2.2	Vertical luminous intensity distribution	8
4.3	Colorimetric requirements	8
4.3.1	General	8
4.3.2	COLREGs	9
4.4	Flashing light	10
4.5	Structural requirements	10
4.6	Fastening	11
4.7	Power supply	11
4.8	General requirements	11
4.8.1	General	11
4.8.2	Equipment category	11
4.8.3	Vibration	11
4.8.4	Rain and spray	11
4.8.5	Solar radiation	11
4.8.6	Corrosion (salt mist)	11
4.8.7	Electromagnetic compatibility	11
4.8.8	Compass safe distance	12
4.8.9	Housing temperature	12
4.8.10	Mechanical shock	12
4.9	Electrical light sources	12
4.10	Other light sources, e.g. light emitting diodes (LED) and their particularities	12
4.10.1	Deviations caused by service life conditions	12
4.10.2	Influence of temperature	12
4.10.3	Pulse frequency	12
4.11	Holders for electrical light sources	13
4.12	Partially-screened navigation lights	13
5	Testing	13
5.1	General	13
5.1.1	Validity of EN 60945	13
5.1.2	Performance test and performance check	13
5.1.3	Pretreatment	13
5.1.4	Order of the tests	13
5.1.5	Documentation	13
5.2	Photometric and colorimetric tests	14
5.2.1	Test voltage	14
5.2.2	Photometric test	14

5.2.3	Colorimetric test	16
5.2.4	Measurement of luminous intensity and colour locus under the influence of temperature	18
5.2.5	Measurement of flashing lights	18
5.3	Explanations, supplements or amendments to points in EN 60945	19
5.3.1	Corrosion (salt mist)	19
5.3.2	Extreme power supply	19
5.3.3	Dry heat	19
5.3.4	Damp heat	19
5.3.5	Vibration	19
5.3.6	Rain and spray	19
5.3.7	Solar radiation	20
5.3.8	EMC	20
5.4	Tests outside the scope of EN 60945	20
5.4.1	Shock	20
5.4.2	Enclosure temperature of electrically powered navigation lights	20
5.4.3	Mechanical tensile test on prehoistable navigation lights	20
6	Equipment manual	22
7	Marking	22
Annex A (informative) Electrical light sources		23
A.1	Examples of electrical light sources	23
A.2	Incandescent lamps placed on the market for navigation lights	24
A.2.1	Types of construction	24
A.2.2	Lamp caps	26
Annex B (informative) Instructions for the test laboratory		27
Annex C (normative) COLREGs		33
C.1	Ranges and luminous intensities	33
C.2	Colour ranges	33
Annex D (normative) CCNR and CEVNI		34
D.1	Ranges and luminous intensities	34
D.2	Colour ranges	34
Bibliography		35