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INLAND TRANSPORT COMMITTEE

Working Party on Inland Water Transport

Fiftieth session
Geneva, 11-13 October 2006
Item 7(b) of the provisional agenda

WORK OF THE WORKING PARTY ON THE STANDARDIZATION OF TECHNICAL AND SAFETY REQUIREMENTS IN INLAND NAVIGATION

Updating the European code for inland waterways (CEVNI)

Harmonization of standards for navigation lights of sea-going and river vessels

Note by the secretariat

Addendum

At its thirtieth session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation considered the proposal of Germany concerning the harmonization of standards for navigation lights of sea-going and inland navigation vessels in ECE/TRANS/SC.3/WP.3/2006/2 and asked the secretariat, in cooperation with the delegation of Germany, to prepare and circulate as early as possible, the detailed and concrete proposals on possible amendment of CEVNI with a view to bringing it in line with the standard EN 14744:2005. Governments and River Commissions were invited to consider the draft amendments to CEVNI and make their comments available to the secretariat **before 1 February 2007** so that the Working Party could decide on this item at its next summer session (Geneva, 5-7 June 2007).

Reproduced below is the text of draft amendments to CEVNI prepared by the secretariat in consultation with the delegation of Germany. New or modified text is shown **in bold** characters.

1. Amend the term (t) of article 1.01 to read:

(t) The terms 'scintillating light' and 'quick scintillating light' mean rhythmic lights flashing **40-60** times per minute and 100-120 times per minute;. [1/]

2. Amend annex 5 to read:

ANNEX 5

INTENSITY AND RANGE OF SIGNAL LIGHTS ON VESSELS [2/]

I. GENERAL

1. Signal lights

Signal lights are classified according to their luminous intensity as:

"ordinary lights"
"bright lights"
"strong lights".

2. Relation between I_O, I_B and t

I_O is the photometric luminous intensity in candela (cd), measured at normal voltage for electric lights.

I_B is the operation luminous intensity in candela (cd).

t is the range in kilometres (km).

Taking into account, for example, the ageing of the light source, the degree of dirtiness of the optic and variations in the voltage of the on-board grid, I_B is **20%** less than I_O.

Consequently $I_B = \mathbf{0.8} \cdot I_O$

[1/] Note by the secretariat: In the text of standard EN 14744 the terms "***flashing light***" and "***quick flashing light***" are used. It should be noted however that the term "flashing light" is already used in annex 8 of CEVNI and in annex 1 of SIGNI for the description of a rhythmic light repeated at a rate of "30 or less flashes per minute". Furthermore, the total duration of light in a period of the flashing light is supposed to be "clearly shorter' than the total duration of darkness. All this is contrary to the description of the so-called "scintillating" and "quick scintillating" lights appearing in CEVNI and SIGNI. It should be noted also that CCNR decided to preserve the terms "***scintillating***" and "***quick scintillating***" lights in their Rhine Police Regulations (see document ECE/TRANS/SC.3/WP.3/2006/2/Add.1). In order to bring the terms of CEVNI (and subsequently of SIGNI) closer in line with EN 14744 and, at the same time, to differentiate from the term "flashing light" already used in these two UNECE documents, the Working Party may wish to consider the usage in 1.01(t) of the terms "***quick flashing light***" and "***very quick flashing ligh***t". This would mean that relevant corrections should be made to annex 8 of CEVNI and annex 1 of SIGNI as well.

[2/] On the inland waterways of Belarus, Kazakhstan, Lithuania, Republic of Moldova, Russian Federation and Ukraine, the luminous intensity and range of signal lights on vessels shall satisfy the requirements of the competent national authorities.

[The relation between I_B and t of signal lights is given by the following equation:

$I_B = 0.2 \cdot t^2 \cdot q^{-t}$

The atmospheric transmission coefficient q has been taken as 0.76, corresponding to a meteorological visibility of 14.3 km.] [3/]

II. INTENSITY AND RANGE [4/]

1. Luminous intensity and **visibility** range of signal lights

The following table contains the permitted limits for I_O, I_B and t according to the nature of signal lights. The values indicated apply to the light flux emitted by the lantern.

I_O and I_B are given in cd and t in **nautical miles (nm) and kilometres** (km).

Minimum and maximum values

Nominal value of visibility range of signal lights	Minimum value of visibility range (t_{min})		Maximum value of visibility range (t_{max})		Operational luminous intensity (I_B)	Minimum horizontal photometric luminous intensity (I_O)*	Maximum horizontal photometric luminous intensity (I_O)*	Nature of signal lights
nm	nm	km	nm	km	cd	cd	cd	
1	1	1.85	2	3.70	0.9	1.1	5.4	Ordinary
2	2	3.70	5	9.26	4.3	5.4	6.5	Bright
3	3	5.56	5	9.26	12	15	65	Bright
5	5	9.26	7.5	13.9	52	65**	257	Strong
6	6	11.11	7.5	13.9	94	118**	257	Strong

***** **To be measured in the laboratory.**

****** However, for daytime use of the **strong** yellow scintillating lights a minimum photometric luminous intensity I_o of 900 cd shall apply.

III. SIGNAL LIGHT DISPERSION

1. Horizontal dispersion of intensity

(a) The luminous intensities indicated in section II apply to all directions of the horizontal plane passing through the focus of the optic or the luminous centre of gravity of

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[3/] Note by the secretariat: In document ECE/TRANS/SC.3/WP.3/2006/2 the German delegation proposes to delete the text in square brackets on the ground that the formula of relation between I_b.and t is no longer needed since all necessary values of I_b.and t are given in the table that follows.

[4/] On certain inland waterways the competent authority may allow the carriage by vessels of signal lights in accordance with the requirements of COLREG.

the light source correctly adjusted within the operational sector of a vertically positioned lantern;

(b) For the masthead lights, stern lights and side lights, the luminous intensities prescribed shall be maintained throughout the horizontal arc within the sectors prescribed at least up to within 5° of the limits.

As from 5° within the sectors prescribed up to the limit, the luminous intensity may decrease by 50%; it shall subsequently decrease gradually in such a way that, as from 5° beyond the limits of the sector, only a negligible amount of light remains;

(c) The side lights shall have the prescribed luminous intensity in the direction parallel to the axis of the vessel forward. The intensities shall decrease practically to zero between 1° and 3° beyond the limits of the prescribed sector;

(d) For bicoloured or tricoloured lanterns, the dispersion of the luminous intensity shall be uniform so that 3° on either side of the prescribed sector limits, the maximum permitted intensity is not exceeded and the minimum prescribed intensity is reached;

(e) The horizontal dispersion of the luminous intensity of the lanterns shall be uniform throughout the sector, so that the minimum and maximum values observed do not differ more than by a factor of 1.5 from the photometric luminous intensity.

2. Vertical dispersion of intensity

In the event of heeling of **power driven vessels of** up to ± 5° or ± 7.5° from the horizontal, the luminous intensity shall remain at least equal to **100%** in the first case, and 60% in the second case, of the luminous intensity corresponding to 0° heeling, although it shall not exceed it by more than 1.2 times.

In the event of heeling of sailing vessels of up to ± 5° or ± 25° from the horizontal, the luminous intensity shall remain at least equal to 100% in the first case, and 50% in the second case, of the luminous intensity corresponding to 0° heeling, although it shall not exceed it by more than 1.2 times.

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