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INLAND TRANSPORT COMMITTEE

Working Party on Inland Water Navigation

Working Party on the Standardization of
Technical and Safety Requirements in
Inland Navigation

(Twentieth session, 7-9 June 2000,
agenda item 4)

**RECOMMENDATIONS ON TECHNICAL REQUIREMENTS FOR ELECTRONIC
NAVIGATIONAL SHIPBORNE EQUIPMENT AND ITS INSTALLATION ON
BOARD SHIPS, INCLUDING IN PARTICULAR RADAR INSTALLATIONS AND
RATE-OF-TURN INDICATORS**

Transmitted by the Government of Germany

Note: At its eighteenth session, the Working Party took note of the proposal of the Russian Federation on draft requirements for radar installations and rate-of-turn indicators of inland navigation vessels (TRANS/SC.3/WP.3/1999/19) and agreed to consider it in detail at its twentieth session. Governments and river commissions were invited to comment on this latest proposal of the Russian Federation (TRANS/SC.3/WP.3/36, para. 22).

The secretariat reproduces below the comments on the Russian proposal submitted by the Government of Germany.

1. The proposal of the Russian Federation (TRANS/SC.3/WP.3/1999/19) to supplement article 6.32 of CEVNI concerning the requirements on equipment of inland navigation vessels is appreciated. It must, however, be taken into consideration that the introduction of the above requirements may entail considerable costs for the inland navigation industry. Transitional periods should therefore be provided for. In detail, the following comments could be made on this proposal.
2. For a better understanding, it would be useful to include in para. 1 a formulation similar to the one used in article 4.04, para. 2 of CEVNI (newly-adopted resolution No. 43, document TRANS/SC.3/1999/9) e.g. “Motorized vessels, excluding small craft, ferries and floating equipment may sail only if they are equipped with a radar set.”¹
3. If this formulation does not, however, obtain a majority, at least the following should be taken into consideration. As the zones 1 and 2 are not inland waterways and cannot, therefore, be covered by CEVNI, para. 1 (b) should be deleted. Subparagraphs (c) and (d) should be combined into one and the reference in subparagraph (c) to zone 2 should be deleted.
4. The proposal on the revision of Chapter 11, para. 11-3 of the annex to resolution No. 17, revised “Electronic Navigational Shipborne Equipment” is (in part) accepted with the exception of paras. 11-3.3 and 11-3.8. These provisions largely correspond, also with regard to installation, inspection and marking, to the German regulations (and those of the Central Commission for the Navigation of the Rhine (CCNR)) relating to electronic navigational shipborne equipment.
5. The subsequently mentioned proposals are rejected for the following reasons or should be modified by footnotes.

Ad. para. 11-3.3 Performance monitoring

6. Such an equipment, which allows for the testing of the functionality of a radar installation through all phases without the availability of radar targets is not required for inland navigation. It is not necessary since there are always a sufficient number of targets on inland waterways (banks, structures, other vessels). This function is only required for radar equipment on sea-going vessels.

Ad. para. 11-3.8 The technical specifications of radar equipment

(i) Maximum range

The proposed maximum range is not required in inland navigation since it would be contrary to the objective that the transmission power should be as low as possible. This requirement is only useful for sea radar equipment for coastal shipping.

¹ The competent authorities may waive the provisions of this article.

(ii) Angular resolution

Different requirements as to small and large vessels with regard to the angular resolution are not useful in the case of inland navigation. The German/CCNR regulations provide for an angular resolution of 1.2 or smaller irrespective of the ship's tonnage.

(iii) Effective diameter of screen indicator

Different requirements as to small and large vessels with regard to the diameter of the screen are not necessary for inland navigation. The German/CCNR regulations provide for a screen diameter of at least 270 mm. irrespective of the ship's tonnage.

(iv) Range scales

Non-conforming range scales between the German/CCNR regulations and the Russian proposal are to be found at 0.8, 1.0, 1.2 and 3.2 km. All other range scales correspond to each other. It is, however, not comprehensible, that according to the width of the river estuaries navigated, the optimum range scales can be different. Here, it should be left up to the competent authorities to lay down range scales by means of a footnote.

(v) Emission frequency (better "Transmission frequency")

In inland navigation, only the frequency range of 9.3 to 9.5 GHz (3.2 cm) can be permitted. Tests carried out with 30-GHz facilities have shown that these frequency ranges are not suitable since the reflections in the case of rain and snow are too strong, making the radar image unusable. The equipment of the waterways, too, especially the radar absorbers for the reduction of multiple reflections at bridges are adapted to the frequency range around 9.4 GHz.

(vi) Antenna speed

The German/CCNR regulations require at least 24 revolutions per minute. S band antennas (10 cm) which revolve more slowly are only available on sea-going vessels.
