

RESOLUTION A.343(IX) adopted on 12 November 1975
RECOMMENDATION ON METHODS OF MEASURING
NOISE LEVELS AT LISTENING POSTS

INTER-GOVERNMENTAL MARITIME
CONSULTATIVE ORGANIZATION

ASSEMBLY - 9th session
Agenda item 7(c)



IMCO

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THE ASSEMBLY,

NOTING Article 16(i) of the IMCO Convention concerning the functions of the Assembly,

CONSIDERING the need to restrict the noise levels at listening posts in vessels in order to ensure an adequate probability of hearing a whistle at the audibility range given in the table of paragraph 1(c) of Annex III to the International Regulations for Preventing Collisions at Sea, 1972,

HAVING EXAMINED the Recommendation on Methods of Measuring Noise Levels at Listening Posts adopted by the Maritime Safety Committee at its thirty-second session,

RECOMMENDS that the method for measuring the noise levels at listening posts should be as follows:

- (a) a precision sound level meter according to IEC - Publication No. 179 should be used in conjunction with an octave-band filter according to IEC - Publication No. 225. The microphone should be equipped with a windscreen of known transmission characteristics and an extension cable. At the beginning and the end of each series of measurements the calibration of the sound level meter should be checked with a standard sound source (e.g. a pistonphone) according to the manufacturer's instructions;
- (b) all readings should be taken with the dynamic characteristic "slow". The average of the maximum values observed during a period of ten seconds when the vessel is making way at $\frac{5}{4}$ speed will be regarded as the prevailing noise level. On bridge wings the measurements should be made on the lee-side;

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- (c) the microphone should if possible be so placed that, during the measurements, it is separated by a distance of at least 1.5 m from any substantial reflecting or obstructing surface;
- (d) an average value should be determined in the area of the usual listening position from measurements made in at least three different microphone positions separated by at least 0.5 m from one another and approximately at the average height of ear of normal listeners;
- (e) as far as is practicable, measurements should be made in conditions of wind speed between 5 knots and 10 knots:
 - (i) with the wind ahead,
 - (ii) with the wind astern, and
 - (iii) with the apparent wind successively on both beams and the listening position on the corresponding lee-side of the vessel;
- (f) whether or not these recommended conditions can be achieved, the prevailing wind speed and direction and the course of the vessel should be recorded;
- (g) furthermore, a record should be kept of the state of the sea and of the condition of loading of the vessel,

FURTHER RECOMMENDS that Administrations should institute programmes of measurement in accordance with the above, within the limits of their capabilities, in order that evidence may be collected on the noise levels currently experienced at listening posts, both on existing vessels and on new vessels when brought into service. Administrations are invited to submit the results of such measurements to the Organization for consideration by the appropriate sub-committee(s),

ADOPTS provisional guidelines on maximum acceptable noise levels at listening posts, the text of which appears in the Appendix to this Recommendation.

APPENDIX

PROVISIONAL GUIDELINES ON MAXIMUM ACCEPTABLE
NOISE LEVELS AT LISTENING POSTS

1. It is desirable that the background noise levels at listening posts should not on average exceed the noise level defined by octave-band levels as follows:
 - (a) 68 dB in the band centred on 250 Hz;
 - (b) 63 dB in the band centred on 500 Hz.
 2. Ship designers and builders should be encouraged to meet this requirement in new vessels. Measurements should be made when possible in accordance with the method recommended above, in order to check results.
 3. So far as existing vessels are concerned, it is recognized that problems of a ship construction nature may make it difficult, if not impossible, to meet the requirement. These vessels should therefore comply as far as is feasible.
 4. On the basis of information received from Administrations concerning noise levels measured on existing vessels, IMCO will give further consideration to the possibility of making a Recommendation on maximum permissible noise levels at listening posts.
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