

This document is a preview generated by EVS

**Acoustics - Measurement of airborne sound emitted by vessels on inland waterways and harbours**

Acoustics - Measurement of airborne sound emitted by vessels on inland waterways and harbours

## EESTI STANDARDI EESSÖNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 2922:2001 sisaldb Euroopa standardi EN ISO 2922:2000 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 2922:2001 consists of the English text of the European standard EN ISO 2922:2000.
Käesolev dokument on jõustatud 04.04.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 04.04.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kätesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

<b>Käsitlusala:</b> Standard määrab kindlaks tingimused siseveeteedel ja sadamates igat liiki laevade poolt tekitatava müra taseeme ja müraspektri kordus- ja võrdlusmõõtmise saavutamiseks. Standardit saab rakendada ka väikeste merelaevade, sadamalaevade ja bagerite korral.	<b>Scope:</b>
--	---------------

ICS 17.140.30

Võtmesõnad:

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 2922

November 2000

ICS 03.220.40; 17.140.30

Supersedes EN 22922 : 1993.

## English version

Acoustics

### Measurement of airborne sound emitted by vessels on inland waterways and in harbours (ISO 2922 : 2000)

Acoustique – Mesurage du bruit  
aérien émis par les bateaux de  
navigation intérieure et portuaire  
(ISO 2922 : 2000)

Akustik – Messung des von  
Wasserfahrzeugen auf  
Binnengewässern und in Häfen  
abgestrahlten Luftschalls  
(ISO 2922 : 2000)

This European Standard was approved by CEN on 2000-09-30.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

## Foreword

### International Standard

ISO 2922 : 2000 Acoustics – Measurement of airborne sound emitted by vessels on inland waterways and harbours,

which was prepared by ISO/TC 43 ‘Acoustics’ of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 211 ‘Acoustics’, the Secretariat of which is held by DS, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by May 2001 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 2922 : 2000 was approved by CEN as a European Standard without any modification.

## Contents

Page

1	Scope .....	3
2	Normative references .....	3
3	Terms and definitions .....	3
4	Measurement quantities.....	5
5	Measurement uncertainty .....	5
6	Measuring equipment.....	6
6.1	Equipment specifications .....	6
6.2	Windscreen.....	6
6.3	Equipment calibration .....	6
7	Test site specifications and environmental conditions.....	7
7.1	Test conditions .....	7
7.2	Test site specifications .....	7
7.3	Environmental conditions.....	7
7.4	Background noise.....	7
7.5	Measurements on stationary vessels .....	8
8	Test course and measurement of distance.....	8
9	Operating conditions.....	9
9.1	Distance from microphone .....	9
9.2	Loading condition.....	9
9.3	Main engines .....	9
9.4	Auxiliary engines .....	9
9.5	Doors and windows .....	9
9.6	Monitoring tests .....	9
10	Microphone position .....	9
11	Test procedure .....	10
11.1	Moving vessels .....	10
11.2	Stationary vessels .....	11
12	Test report .....	11
	Bibliography .....	12

## 1 Scope

This International Standard specifies the conditions for obtaining reproducible and comparable measurement results of the airborne sound emitted by vessels of all kinds on inland waterways and in ports and harbours, except powered recreational craft as specified in ISO 14509. This International Standard is applicable to small sea-going vessels, harbour vessels, dredgers, and all watercraft including non-displacement craft, used or capable of being used as a means of transport on water.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

IEC 60942, *Electroacoustics — Sound calibrators*.

IEC 61260, *Electroacoustics — Octave-band and fractional-octave-band filters*.

IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*.<sup>1)</sup>

## 3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

### 3.1

#### **acceptance test for vessels**

#### **acceptance test**

measurement performed to prove that the sound emitted by the vessel, stationary or in motion, as delivered by the manufacturer, complies with noise specifications or prescribed limits

### 3.2

#### **monitoring test for vessels**

#### **monitoring test**

measurement performed in order to check that the sound emitted by the vessel, stationary or in motion, is still within prescribed limits and that no noticeable changes have occurred since the acceptance on initial delivery or after modification, as applicable

---

1) To be published. (Revision of IEC 60651 and IEC 60804)