



SLOVENSKI STANDARD
SIST EN ISO 9876:2000

01-december-2000

Ships and marine technology - Marine facsimile receivers for meteorological charts (ISO 9876:1997)

Ships and marine technology - Marine facsimile receivers for meteorological charts (ISO 9876:1997)

Schiffe und Meerestechnik - Schiffsfaksimileempfänger für meteorologische Karten (ISO 9876:1997)

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Navires et technologie maritime - Récepteurs marins de transmissions par télécopie des cartes météorologiques (ISO 9876:1997)

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Ta slovenski standard je istoveten z: EN ISO 9876:1998

ICS:

47.020.70	Navigacijska in krmilna oprema	Navigation and control equipment
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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9876

December 1998

ICS 47.020.00

Supersedes EN ISO 9876:1994

Descriptors: see ISO document

English version

Ships and marine technology - Marine facsimile receivers for
meteorological charts (ISO 9876:1997)

Navires et technologie maritime - Récepteurs marins de
transmissions par télécopie des cartes météorologiques
(ISO 9876:1997)

Schiffe und Meerestechnik - Schiffsfaksimileempfänger für
meteorologische Karten (ISO 9876:1997)

This European Standard was approved by CEN on 6 December 1998.

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.

This European Standard exists 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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EN ISO 9876:1998

Foreword

The text of the International Standard ISO 9876:1998 has been prepared by Technical Committee ISO/TC 8 "Ships and marine technology" in collaboration with Technical Committee CEN/TC 300 "Sea-going vessels and marine technology", the secretariat of which is held by DIN.

This European Standard supersedes EN ISO 9876:1994.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 1999, and conflicting national standards shall be withdrawn at the latest by June 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

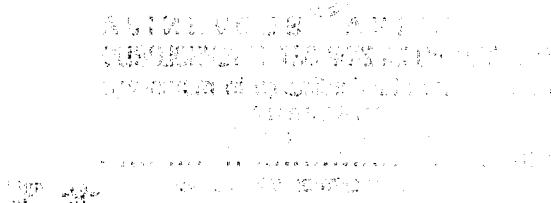
Endorsement notice

The text of the International Standard ISO 9876:1998 was approved by CEN as a European Standard without any modification.

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INTERNATIONAL
STANDARD

ISO
9876

Second edition
1997-06-15

**Ships and marine technology —
Marine facsimile receivers for
meteorological charts**

iTeh STANDARD PREVIEW

(standards.iteh.ai)

*Navires et technologie maritime — Récepteurs marins de transmissions
par télécopie des cartes météorologiques*

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Reference number
ISO 9876:1997(E)

ISO 9876:1997(E)**Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9876 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 6, *Navigation*.

This second edition cancels and replaces the first edition (ISO 9876:1987), which has been technically revised.

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Ships and marine technology — Marine facsimile receivers for meteorological charts

1 Scope

This International Standard specifies the construction, performance, type testing and inspection for a shipborne marine facsimile receiver that receives meteorological charts transmitted by “Facsimile transmission of meteorological chart over radio circuits” stated in accordance with Recommendation 343-1 of the International Radio Consultative Committee (CCIR) and Document No. 386, Part III-7, specified by the World Meteorological Organization (WMO).

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This International Standard applies to shipborne radio facsimile receivers for the reception of meteorological charts and other graphical representation of meteorological conditions intended as an aid to navigation at sea.

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2 Normative references

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The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/R 694:1968, *Positioning of magnetic compasses in ships*.

IEC 945:1994, *Marine navigational equipment — General requirements — Methods of testing and required test results*.

International Radio Consultative Committee, Recommendation 343-1:1984, *Facsimile transmission of meteorological charts over radio circuits*.

Technical characteristics of equipment for meteorological facsimile (analogue) transmissions No. 386, Part III-7:1986, World Meteorological Organization.

3 Definitions

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

3.1 dead sector: Part of scanning line unavailable for picture signal transmissions the criteria of which are within $4,5 \% \pm 0,5 \%$ of the length.

3.2 facsimile: Process, or the result of the process, by which fixed graphic charts are scanned and the information is converted to electric signals which are used remotely to produce a copy of the chart in record form.

3.3 index of cooperation (IOC): The value of the index of cooperation, M , is defined as follows:

$$M = LF/p$$

where

L is the length of the scanning line, in centimetres;

F is the density of the scanning line, in reciprocal centimetres.

3.4 IOC selection signal: Signal for automatic IOC selection in the facsimile receiver which is accomplished by transmission of alternating black and white signals lasting for 5 s to 10 s with the following frequencies:

300 Hz for IOC 576

675 Hz for IOC 288 (or IOC 576 with alternate line scanning)

NOTES

1 This signal is also used for automatic starting of the receiver.

2 The envelopes of the signal are approximately rectangular.

3.5 meteorological chart: Chart portraying the state of the weather, such as weather conditions, wind force and direction, high or low atmospheric pressure, weather front and isobar, at a particular time over a wide area.

3.6 phasing: Adjusting the phase of the independent synchronous power source so as to be able to receive the weather chart in its correct position.

3.7 phasing signal: Signal for automatically phasing the facsimile receiver is accomplished by a 30 s transmission of alternating black and white signals with the following frequencies:

1 Hz for 60 lines per minute (60 r/min)

1,5 Hz for 90 lines per minute (90 r/min)

2 Hz for 120 lines per minutes (120 r/min)

NOTES

1 This signal may be also used for automatic starting, automatic selection of scanning frequency and automatic adjustment of recording levels.

2 The wave form of this signal is either symmetrical, i.e. black and white, each lasting half the scanning line, or symmetrical with the white lasting for 5 % and black for 95 % of the scanning line.

3.8 remote control signal: Control signal for operating the apparatus from a distance.

NOTE — The remote control signals for operating the facsimile receiver for meteorological charts include the phasing signal, the IOC selection signal and stop signal.

3.9 SND/N: Value of signal plus noise plus distortion to noise ratio.

3.10 SND/ND: Value of signal plus noise plus distortion to noise plus distortion ratio.

3.11 spurious responses: Ratio of the input level of an unwanted signal, at the frequency of the spurious response to the input level of a wanted signal, when the wanted and unwanted signals individually produce the same SND/N or SND/ND ratio at the receiver output.

3.12 stop signal: Transmission of 5 s of alternating black and white signals at 450 Hz, followed by 10 s of signal corresponding to continuous black.

NOTE — The envelopes of the 450 Hz signals are approximately rectangular.

4 Requirements

4.1 Construction

4.1.1 The equipment shall comprise a radio receiver and a recording unit.

4.1.2 The recording unit shall be so constructed as to allow for the change of recording paper and either or both recording stylus during day and subdued artificial light. It should be possible to effect routine maintenance under the same conditions.

4.2 Performance standards for recording unit

4.2.1 Recording unit

The equipment shall be capable of continuous recording whilst transmissions are being received.

4.2.2 Input signals

The recording unit shall accept input signals from an external receiver in the audio frequency range at an input level of at least -10 dBm to $+10$ dBm and shifts of ± 150 Hz and/or ± 400 Hz about a centre frequency of $1\,900$ Hz at an impedance of $600\ \Omega$.

4.2.3 Index of cooperation (IOC)

Automatic or manual operation at an index of cooperation of 576 and 288 shall be possible.

4.2.4 Scanning speeds

The recording unit shall be capable of the automatic and manual selection of scanning speeds of 60, 90 and 120 scans per minute.

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4.2.5 Automatic operation

The recording unit shall automatically respond to control signals of 300 Hz and 675 Hz modulation of the carrier wave for start and index of cooperation selection and to 450 Hz modulation stop signal.

4.2.6 Synchronization of scanning and phasing

The recording unit shall be capable of synchronization of its operation with the facsimile transmitter by

- frequency accuracy of $\pm 2 \times 10^{-6}$ min.
- frequency stability of $\pm 2 \times 10^{-5}$ min.

Phasing shall be automatic with a facility for manual adjustment.

4.2.7 Pitch of scanning trace

The pitch of scanning traces shall be maintained within $\pm 25\%$ of its nominal value.

4.2.8 Recording size and marking

The minimum width of the recording shall be 180 mm.

The recording material shall be marked in such a way as to indicate that the material remaining is not less than 1 m.