Trovollor insignation

Traveller irrigation machines - Part 1: Operational characteristics and laboratory and field test methods

Traveller irrigation machines Part 1: Operational characteristics and laboratory and field test methods



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 8224-1:2003 sisaldab Euroopa standardi EN ISO 8224-1:2003 ingliskeelset teksti.

Käesolev dokument on jõustatud 06.06.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 8224-1:2003 consists of the English text of the European standard EN ISO 8224-1:2003.

This document is endorsed on 06.06.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

This part of ISO 8224 specifies the operational characteristics of, and laboratory and field test methds for, traveller irrigation machines*

Scope:

This part of ISO 8224 specifies the operational characteristics of, and laboratory and field test methds for, traveller irrigation machines*

ICS 65.060.35

Võtmesõnad: agricultural equipment, agriculture, definition, definitions, field testing, irrigation, laboratory testing, laboratory tests, mobile, sprayers, testing, tests, watering equipment

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 8224-1

February 2003

ICS 65,060.35

English version

Traveller irrigation machines

Operational characteristics, laboratory and field test methods (ISO 8224-1:2003)

Machines d'arrosage mobiles -Partie 1: Caractéristiques opérationnelles et méthodes d'essai en laboratoire et au champ (ISO 8224-1:2003)

Mobile Beregnungsmaschinen -Teil 1: Betriebskennwerte, Prüfverfahren für Labor- und Felduntersuchungen (ISO 8224-1:2003)

This European Standard was approved by CEN on 2002-12-18.

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 Management Centre 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 Management Centre 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Slovakia, CO OTTE Spain, Sweden, Switzerland, and the United Kingdom.

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

Management Centre: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 8224-1: 2003 Traveller irrigation machines - Part 1: Operational characteristics, laboratory and field test methods,

which was prepared by ISO/TC 23 'Tractors and machinery for agriculture and forestry' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 334 'Irrigation techniques', the Secretariat of which is held by AFNOR, 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 encorsement, and conflicting national standards withdrawn, by August 2003 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 8224-1: 2003 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative.)

Con	ntents	Page
Forev	word	2
1	Scope	3
2	Normative references	3
3	Terms, definitions and symbols	3
4	Functional aspects and technical information	10
5 5.1	Test specifications	10
5.1 5.2 5.3	Scope	······················· 10 ·············
5.4 5.5	Sampling and general preparation of test traveller irrigation machine	12
6 6.1 6.2 6.3 6.4 6.5 6.6	Specific machines Laboratory uniformity tests General Test conditions Apparatus Required pre-test data Procedure Processing laboratory uniformity test data Presentation of results	16
6.7 7 7.1 7.2 7.3 7.4 7.5	Laboratory drive tests General Laboratory drive test equipment Laboratory drive test conditions Laboratory drive test procedure Laboratory drive test results	
8 8.1 8.2 8.3 8.4 8.5	Field uniformity tests General Apparatus Field uniformity test procedure Field uniformity test data processing and results Graphs of field uniformity test results	30 31 32 34

1 Scope

This part of ISO 8224 specifies the operational characteristics of, and laboratory and field test methods for, traveller irrigation machines. It includes

- user-oriented technical information for inclusion in the manufacturer's accompanying product literature,
- laboratory test procedures for evaluating the uniformity of water application on an irrigated strip by a machine operating within a specified range of conditions and for determining the maximum travelling rates the drive mechanism is able to achieve in response to specified operating conditions, and
- field test procedures for determining the uniformity of water application on a given irrigated strip under local conditions prevailing in the field at time of testing.

It is applicable only to traveller irrigation machines and not to other types of irrigation machine such as centre-pivot and moving lateral irrigation machines.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7749-2:1990, Irrigation equipment Rotating sprinklers — Part 2: Uniformity of distribution and test methods

ISO 8026, Agricultural irrigation equipment—Sprayers — General requirements and test methods

ISO 11545, Agricultural irrigation equipment Centre-pivot and moving lateral irrigation machines with sprayer or sprinkler nozzles — Determination of uniformity of water distribution

3 Terms, definitions and symbols

For the purposes of this document, the following terms, definitions and symbols (see Table 1) apply.

3.1

traveller irrigation machine

machine designed to irrigate a field sequentially, strip by strip, by causing, through various coiling techniques, a cart equipped with a travelling water distribution system (sprinkler or gun-type sprinkler, combination of sprinklers and guns, boom with set of sprinklers, sprayers or other kinds of water distribution devices) to travel