

Agricultural irrigation equipment —

Part 1: Definition of terms and classification

ICS 65.060.35

National foreword

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Summary of pages

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Agricultural irrigation equipment — Sprinklers —

Part 1: Definition of terms and classification

Matériel agricole d'irrigation — Asperseurs —

Partie 1: Définition des termes et classification



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Foreword

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ISO 15886-1 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 18, *Irrigation and drainage equipment and systems*.

ISO 15886 consists of the following parts, under the general title *Agricultural irrigation equipment — Sprinklers*:

- *Part 1: Definition of terms and classification*
- *Part 3: Characterization of distribution and test methods*

Design and operational requirements, and test methods for durability, are to form the subjects of future parts 2 and 4.

Agricultural irrigation equipment — Sprinklers —

Part 1: Definition of terms and classification

1 Scope

This part of ISO 15886 defines terms used in relation to sprinklers intended for agricultural irrigation and provides a means of classifying those sprinklers according to physical factors, characteristics of water spray, mechanism for operation and water distribution, approach to sealing, intended use, and additional functions incorporated into the sprinkler. Its scope is intentionally broad in order to cover the widest possible range of sprinkler construction, performance and intended-use alternatives.

2 Terms and definitions

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

2.1

accumulator

hydraulic device that stores fluid under pressure and cushions shock waves

2.2

anti-drain valve

valve designed to remain closed whenever the system pressure does not exceed a pre-set value and to open for higher pressures

2.3

chemigation

application of chemicals through irrigation systems

2.4

compression-disk nozzle

nozzle fitted with an elastic disk that flexes under pressure so as to alter the nozzle's hydraulic properties

2.5

cross vane

flow-conditioning vane of nozzle, the design of which tends to trap waterborne contaminants

2.6

constant-acceleration nozzle

nozzle whose shape changes gradually and smoothly so as to cause a constant rate of acceleration in the flow passages

2.7

constant with fixed operating conditions

internal geometry of nozzle that does not vary under fixed operating conditions, thus maintaining constant hydraulic properties

2.8

constricting-passage nozzle

nozzle fitted with elastic sleeves that alter the nozzle's hydraulic properties in response to changes in operating pressure

2.9

continuous-move system

irrigation system where the sprinklers' set positions are fixed in one direction and variable in the moving direction

EXAMPLE Centre pivot, linear move system, traveller.

2.10

controlled-acceleration nozzle

nozzle whose shape changes gradually and smoothly so as to cause a specific rate or rates of acceleration in the flow passages

2.11

customized nozzle

nozzle whose design changes so as to meet pre-specified hydraulic criteria relative to acceleration, turbulence, separation, etc.

2.12

element parallel to water flow

upstream flow-conditioning component incorporated in a nozzle, the centreline of which is parallel to the nozzle's centreline

2.13

element not parallel to water flow

upstream flow-conditioning component incorporated in a nozzle, the centreline of which is at an angle to the nozzle's centreline

2.14

elevation of spray

height that a spray rises above a horizontal plane passing through the nozzle elevation

2.15

finger spray

spray whose every stream is an individual concentration of water — either as a coherent jet or a directed concentration of individual drops

2.16

flexing-orifice nozzle

nozzle fabricated from elastic materials that flex under pressure so as to alter the nozzle's hydraulic properties

2.17

flow-rate-change

function of a sprinkling device that, during operation, automatically provides a change in hydraulic properties

2.18

fluidic device

nozzle that employs fluidic principles, such as jets directed over curved splash plates, to achieve its design hydraulic-performance objectives

2.19

gradual-acceleration nozzle

nozzle whose shape changes gradually and smoothly so as to cause a gradual — usually linear — acceleration in the flow passages