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Agricultural irrigation equipment — Plastics saddles —

Part 1: Polyethylene pressure pipes

Materiel agricole d'irrigation — Selles de derivation en matiere plastique —

Partie 1: Tuyau en polyethylene utilise sous pression

Reference number
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Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Materials **2**
5 Workmanship and appearance **2**
6 Branch outlet **3**
7 Material strength test **3**
8 Mechanical and hydraulic characteristics **5**
8.1 General 5
8.2 Resistance to short-term internal hydrostatic pressure 5
8.3 Resistance to long-term internal hydrostatic pressure 6
8.4 Resistance to internal under-pressure 6
8.5 Resistance to pressure during application of a bending moment to the branch outlet 6
8.6 Resistance to sliding of the saddle on the pipe 7
8.6.1 Preparation 7
8.6.2 Resistance to rotational sliding 7
8.6.3 Resistance to axial sliding 8
9 Marking **9**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 18, *Irrigation and drainage equipment and systems*.

This first edition of ISO 13460-1 cancels and replaces ISO 13460:1998, which has been technically revised and renumbered.

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Agricultural irrigation equipment — Plastics saddles —

Part 1: Polyethylene pressure pipes

1 Scope

This part of ISO 13460-1 specifies the required properties and test methods for plastics saddles for assembly on polyethylene (hereinafter "PE") pressure pipes used in above-ground and underground irrigation systems conveying water at temperatures not exceeding 50 °C.

2 Normative references

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

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 1167-1, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method*

ISO 3459, *Plastic piping systems — Mechanical joints between fittings and pressure pipes — Test method for leaktightness under negative pressure*

ISO 4427-2, *Plastics piping systems — Polyethylene (PE) pipes and fittings for water supply — Part 2: Pipes*

ISO 8779, *Plastics piping systems — Polyethylene (PE) pipes for irrigation — Specifications*

ISO 17885, *Plastics piping systems — Mechanical fittings for pressure piping systems — Specifications*

3 Terms and definitions

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

3.1
saddle
fitting used to connect a branch outlet to a polyethylene pipe through a boring in the wall of the pipe

3.2
branch outlet
outlet of a saddle the axis of which is perpendicular to the axis of the pipe on which the saddle is installed

Note 1 to entry: See Figure 1.

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a) Without protrusion into the pipe **b) With protrusion into the pipe**

Figure 1 — Examples of plastics saddles

3.3
nominal size
numerical designation used to refer to the size of a saddle which is identical to the nominal diameter of the pipe on which it is intended for assembly

3.4
nominal pressure
PN
used to classify a saddle which is identical to the nominal pressure of the pipe on which it is intended for assembly

4 Materials

Metal parts of a saddle shall be corrosion-resistant.

All parts of a saddle coming in contact with water shall be resistant to agricultural chemicals used in irrigation, such as fertilizer solutions, plant protection materials and fluids used for removal of blockages in emitters and emitting pipe systems.

Plastics parts of a saddle that are exposed to ultraviolet radiation in working conditions under which the saddle operates shall be resistant to ultraviolet radiation.

Plastics parts that enclose waterways shall be opaque or shall be provided with an opaque cover.

5 Workmanship and appearance

The saddle shall be free of burrs or other features likely to damage the pipe or present a safety hazard during installation. The bore of the saddle outlet shall be free of irregularities which may restrict water flow.

The saddle shall be designed to cause minimum interference to the flow of water in the pipe on which it is installed.

Internal and external surfaces of the saddle shall be clean and free of grooves, pinholes, voids or other features likely to affect the performance and service of the system.

The saddle shall be manufactured at such diameter and within such tolerances that will permit its use with PE pipes in accordance with ISO 4427-2 and ISO 8779.

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