INTERNATIONAL STANDARD

ISO 4210-8

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Corrected version
2014-11-01

Cycles — Safety requirements for bicycles —

Part 8: Pedal and drive system test methods

Cycles — Exigences de sécurité des bicyclettes —

Partie 8: Méthodes d'essai des pédales et du pédalier

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Contents

Page

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.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

This first edition of ISO 4210-8, together with ISO 4210-1, ISO 4210-2, ISO 4210-3, ISO 4210-4, ISO 4210-5, ISO 4210-6, ISO 4210-7, and ISO 4210-9 cancels and replaces ISO 4210:1996, which has been technically revised.

ISO 4210 consists of the following parts, under the general title *Cycles — Safety requirements for bicycles*:

— *Part 1: Terms and definitions*

— *Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles*

— *Part 3: Common test methods*

— *Part 4: Braking test methods*

— *Part 5: Steering test methods*

— *Part 6: Frame and fork test methods*

— *Part 7: Wheels and rims test methods*

— *Part 8: Pedals and drive system test methods*

— *Part 9: Saddles and seat-post test methods*

This corrected version of ISO 4210-8:2014 incorporates a modification in the key of Figure 6, item 4.

Introduction

This International Standard has been developed in response to demand throughout the world, and the aim has been to ensure that bicycles manufactured in compliance with this International Standard will be as safe as is practically possible. The tests have been designed to ensure the strength and durability of individual parts as well as of the bicycle as a whole, demanding high quality throughout and consideration of safety aspects from the design stage onwards.

The scope has been limited to safety considerations, and has specifically avoided standardization of components.

If the bicycle is to be used on public roads, national regulations apply.

Cycles — Safety requirements for bicycles —

Part 8:
Pedal and drive system test methods

1 Scope

This part of ISO 4210 specifies pedal and drive system test methods for ISO 4210-2.

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 4210-1, *Cycles – Safety requirements for bicycles – Part 1: Terms and definitions*

ISO 4210-3:2014, *Cycles – Safety requirements for bicycles – Part 3: Common test methods*

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

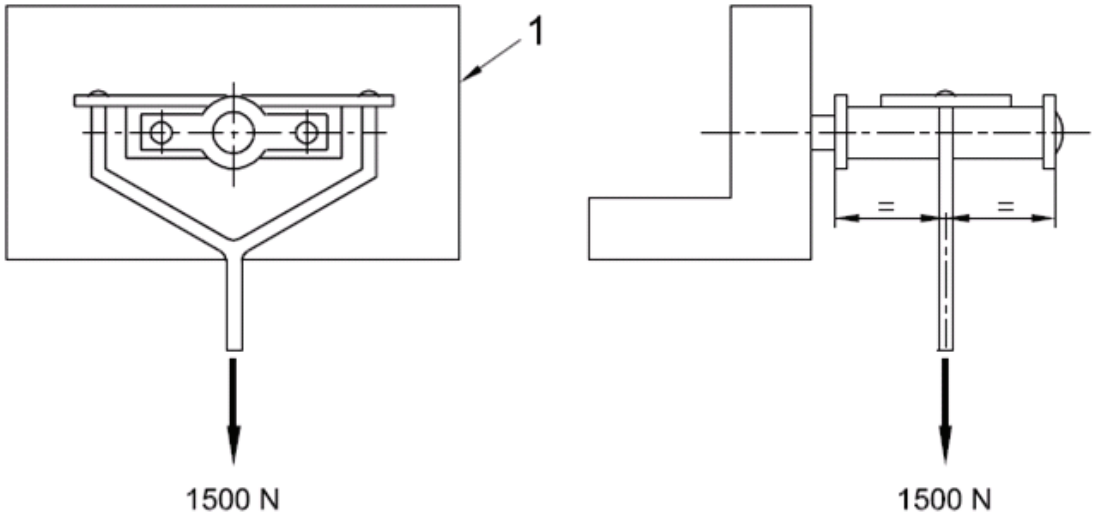
3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4210-1 apply.

4 Test methods

4.1 Pedal — Static strength test

Screw the pedal-spindle securely into a suitable rigid fixture with its axis horizontal, as shown in Figure 1, and apply a vertically downward force of 1 500 N for 1 min to the centre of the pedal as shown in Figure 1. Release the force and examine the pedal assembly and the spindle.



Key
1 rigid mount

Figure 1 — Pedal/pedal-spindle assembly — Static strength test

4.2 Pedal — Impact test

Screw the pedal-spindle securely into a suitable rigid fixture with its axis horizontal as shown in Figure 3 and release a striker of the design shown in Figure 2 and mass of 15 kg from a height of 400 mm to strike the pedal at the centre of the pedal. The width of the striker shall be wider than the width of the tread surface.

NOTE See ISO 4210-3:2014, Annex B.

Dimensions in millimetres

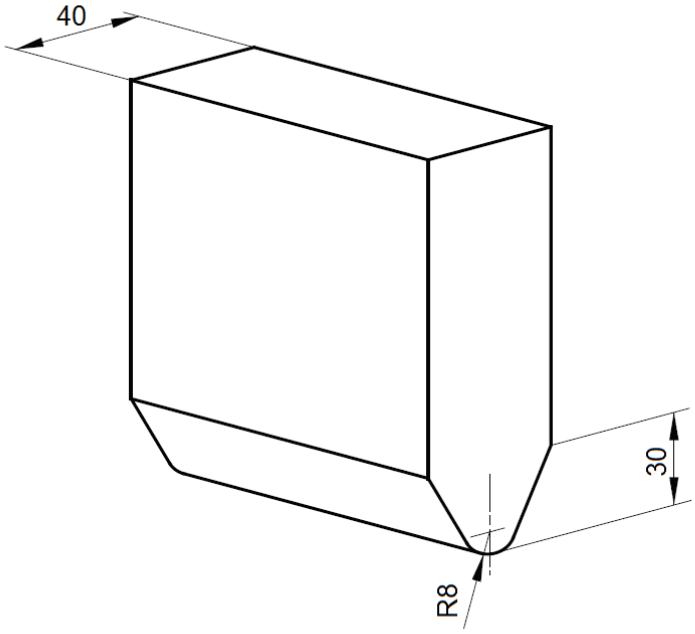


Figure 2 — Striker dimensions

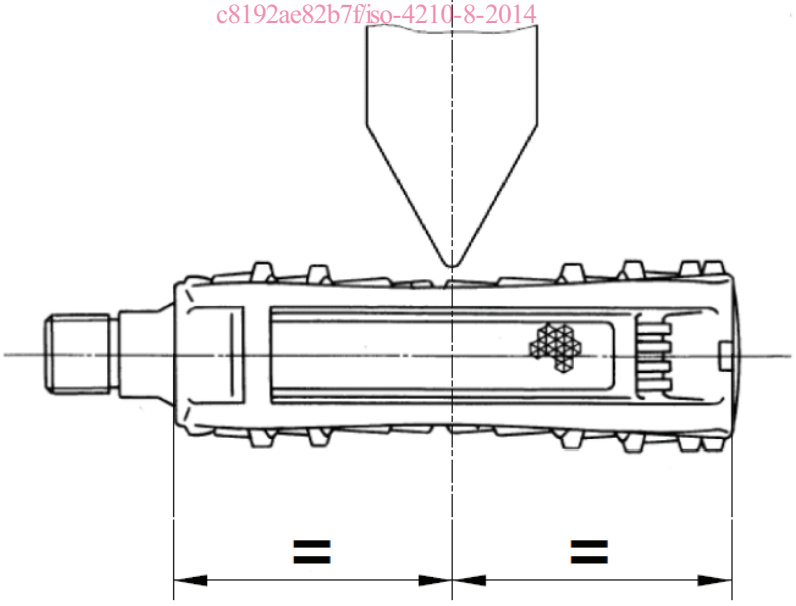


Figure 3 — Position of impact