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Alpine skis — Guidelines for conducting slope performance tests

Skis alpins — Principes directeurs pour la réalisation d'essais de performance sur piste

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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 83, *Sports and other recreational facilities and equipment*, Subcommittee SC 4, *Snowsports equipment*.

This second edition cancels and replaces the first edition (ISO 8783:1999), which has been technically revised.

Alpine skis — Guidelines for conducting slope performance tests

1 Scope

This International Standard provides guidelines for carrying out comparative testing of alpine skis with the objective of evaluating the performance characteristics.

It is applicable to alpine skis in accordance with ISO 6289.

2 Normative reference

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 6289, *Skis — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6289 and the following apply.

3.1
turnability
ski characteristic relating to ease of turning

Note 1 to entry: The less force and movement required, the greater the turnability.

3.2
edge grip
ski characteristic pertaining to the ability of the ski to hold on hard surfaces

3.3
steering behaviour
ski characteristic pertaining to the execution and completion of a turn to change direction

3.4
stability
ski characteristic pertaining to maintaining direction at a given speed when turning

3.5
quietness
ski characteristic pertaining to dampening behaviour, anti-shock, ability to absorb shock

3.6
skier friendly
ski character
ski characteristic pertaining to the ease of use or exaggerated control actions of the skier

3.7
total score
sum of all ratings

4 Principle

Evaluation of ski performance through

— subjective and comparative rating by competent test personnel based on the test criteria provided, and

— statistical support by using sufficient individual results with regard to test personnel, terrain conditions and test skis.

5 Test conditions

The test run shall provide terrain on which all skiing manoeuvres can be carried out. The site shall permit every tester to conduct the same manoeuvres at the same place on the slope.

The test shall be carried out in hard and well-prepared snow conditions.

Each tester shall test every ski of a predetermined group of skis. Skis belonging to the same category of test skis shall be tested within one day, provided that snow conditions do not change considerably during the course of the day. If snow conditions do change considerably within the course of the day, the test shall be interrupted and be continued, provided snow conditions are comparable, on the next day.

6 Test personnel

6.1 Requirements

The test personnel shall be independent, neutral, and discreet, as responsible experts.

6.2 Skiing ability

The skiing ability of personnel shall be such that a representative evaluation of the skis in accordance with the test run is ensured. The physical condition of personnel shall be adequate for the tasks of the test. The physical condition and the skiing ability should not change significantly during the course of the test. The tester shall be capable and shall be trained to use ski techniques according to the test criteria and also to perform skiing motions treated as single movements.

6.3 Assessment ability

The tester shall be completely informed about all evaluation criteria and about the system rating scale.

7 Test committee

Tests shall be supervised by a test committee consisting of at least three technical experts and the test supervisor.

The test committee shall determine, by majority vote, when the conditions are adequate for testing.

8 Test skis

The test skis shall be typical of the model to be tested and shall be tested as delivered by the manufacturer. The test skis shall be inspected and if, in the course of the test, retuning is deemed to be necessary, this shall be done in accordance with manufacturer's instructions.

The running surfaces shall be cleaned and uniformly waxed in accordance with the snow conditions at the time of the test.

For each tester, the boot and binding shall be fitted correctly in relation to the mounting point of the ski, for example by the use of bindings with a movable toe-piece.

9 Rating

9.1 Criteria

The criteria to be tested are listed below:

a) movement;

b) edge grip;

c) steering behaviour;

d) stability;

e) quietness;

f) skier friendly/ski character.

9.2 Classification

For proper comparative rating, it is necessary to use reference skis. These reference skis shall be used repeatedly by all testers. Test skis are rated by comparison with the performance of the reference skis.

To assess the required criteria, a rating scale of five grades should be used:

a) very good;

b) good;

c) satisfactory (no special positive or negative characteristics);

d) poor;

e) very poor.

10 Preparation

The test ski shall be tested in an undamaged condition only (free of burrs). When the running surface is damaged considerably, the ski shall be withdrawn from the test for refurbishment of the damaged area.

There shall be no tests prior to the official test and nobody shall be allowed to ski on the test skis prior to the official test.

11 Additional elements and tuning (binding and damping elements)

If a ski model is sold exclusively with such additional attached/mounted elements, this ski model may be tested in its category together with comparable skis which do not feature this kind of element.

If a ski model can be tuned by means of optional elements in order to alter its performance, then it should be possible to test this particular function as well, or it should be possible to conduct a separate test for the ski with the tuning elements.

12 Binding and binding systems

The ski shall be tested with the bindings or binding systems which are recommended by the manufacturer.

13 Test report

The test report shall include at least the following information:

a) a reference to this International Standard, i.e. ISO 8783;

b) an indication of whether the skis are tested as delivered or whether they have been treated for the test;

c) a description of the skis tested and their lengths;

d) individual ratings given;

e) total scores and standard deviations;

f) any significant deviation from the average of the skis and testers (e.g. tester's weight or height, skis length, width, side cuts).

14 Publication of test results

Published test results shall provide information on all test and snow conditions.

If ski characteristics are described verbally, only clearly defined technical terms should be used.

If the publication provides information in the form of an overall score, the weight of individual ratings and the reasoning for this weighting system shall be explained. All considerations which have led to the overall score shall be published.

An appropriate person or body shall take legal responsibility for carrying out tests and publication of the test results.