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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Road vehicles — Brake linings — Disc brake pads — Evaluation of surface and material flaws after testing

Véhicules routiers — Garnitures de freins — Patins de freins à disque — Mesurage des défauts de surface et de matériau après les essais

Reference number
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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7629 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Road vehicles — Brake linings — Disc brake pads — Evaluation of surface and material flaws after testing

0 Introduction

Disc brake pads may show damage after being subjected to vehicle or laboratory tests. This International Standard has the purpose of specifying a method of describing some of this damage.

1 Scope and field of application

This International Standard identifies the types of flaws of surface and material after testing of disc brake pads, and specifies the method of measuring these flaws and of setting out the results.

This International Standard applies to disc brake pads intended for fitting to the brakes of road vehicles.

2 Identification of defects

The presence of a flaw is decided only if it is detectable with the naked eye.

Flaws to be considered are of four types:

Type I — Cracks (see figure 1)

Type II — Edge flaking (see figure 2)

Type III — Blistering and pitting (see figure 3)

Type IV — Material separation from the support or material lamina separation (see figure 4)

3 Measuring equipment

Transparent millimetric grid of sufficient area to cover the whole area on which defects are to be measured (see figure 5).

4 Measurement method

4.1 Preliminary measurements

4.1.1 On the lining, prior to testing, measure and record:

a) the lining height measured on the lining median line, H, in millimetres (see figure 1), or, for non-symmetrical shapes, the maximum height;

b) the friction surface area, A_0, in square millimetres.

4.1.2 Determine a reference point A, located at the middle of height H (see figure 5).

4.2 Measurement of flaws

4.2.1 Flaws of type I (see figure 1)

Measure the length, l, of each crack.

Position the millimetric grid on point A, as illustrated in figure 5.

Count the cracks within the 10 mm × 10 mm area which has the greatest density of cracks. All cracks partially crossing the area are to be included.

4.2.2 Flaws of types II and III (see figures 2 and 3)

Place the millimetric grid on the work surface. Determine the area of each flaw with the naked eye.

NOTE — For simplicity, edge flaking can be characterized by $a \times b$ (see figure 2).

4.2.3 Flaws of type IV (see figure 4)

Measure the length, L.

5 Expression of results

5.1 Cracks (type I)

5.1.1 Calculate, as a percentage of the lining height H, and record:

a) length of the longest crack;

b) sum of all crack lengths.

5.1.2 Record the greatest number of cracks observed per 100 mm^2.

5.2 Edge flaking (type II), blistering and pitting (type III)

Add all these flaws (types II and III). Calculate the total as a percentage of the surface area A_0, and record:

a) area of the biggest flaw;

b) sum of all flaw areas.

5.3 Material separation from support and material lamina separation (type IV)

Calculate, as a percentage of the lining height, H, and record:

a) longest separation length;

b) sum of all separation lengths.

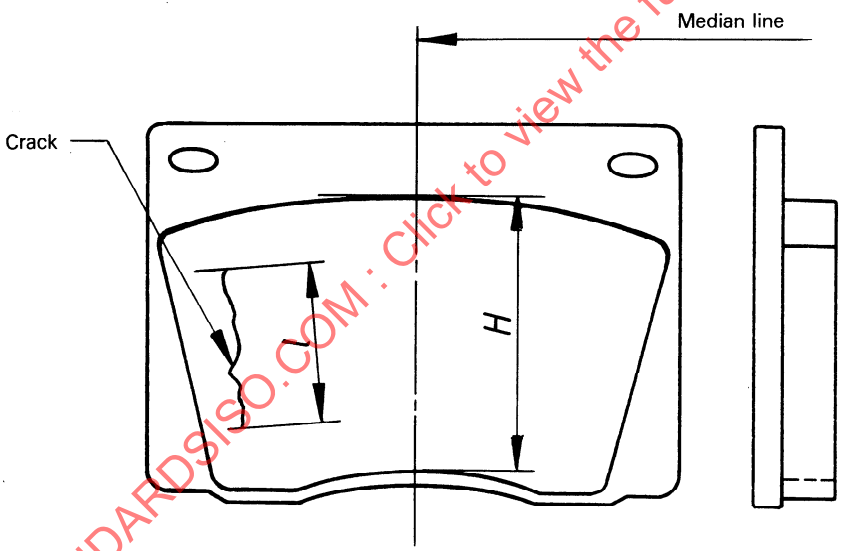

Figure 1 — Example of crack (type I flaw)

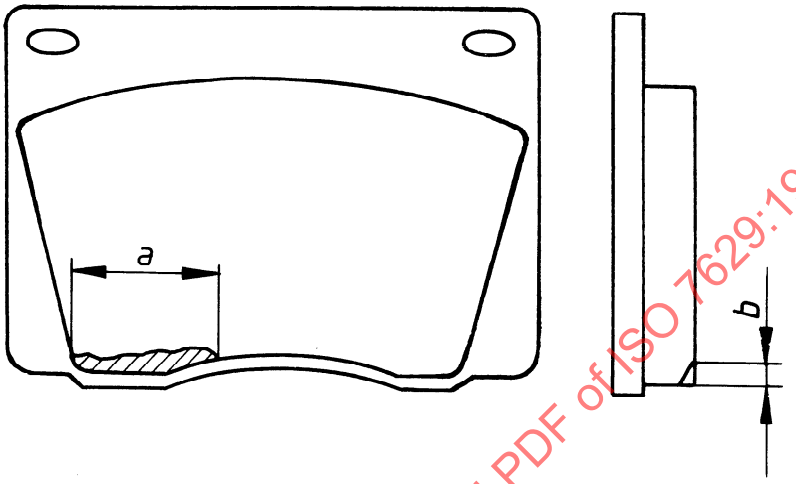

Figure 2 — Example of edge flaking (type II flaw)

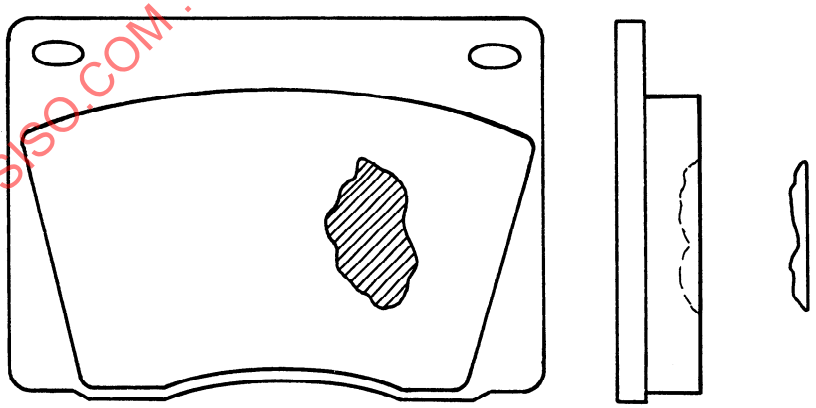

Figure 3 — Example of blistering or pitting (type III flaw)

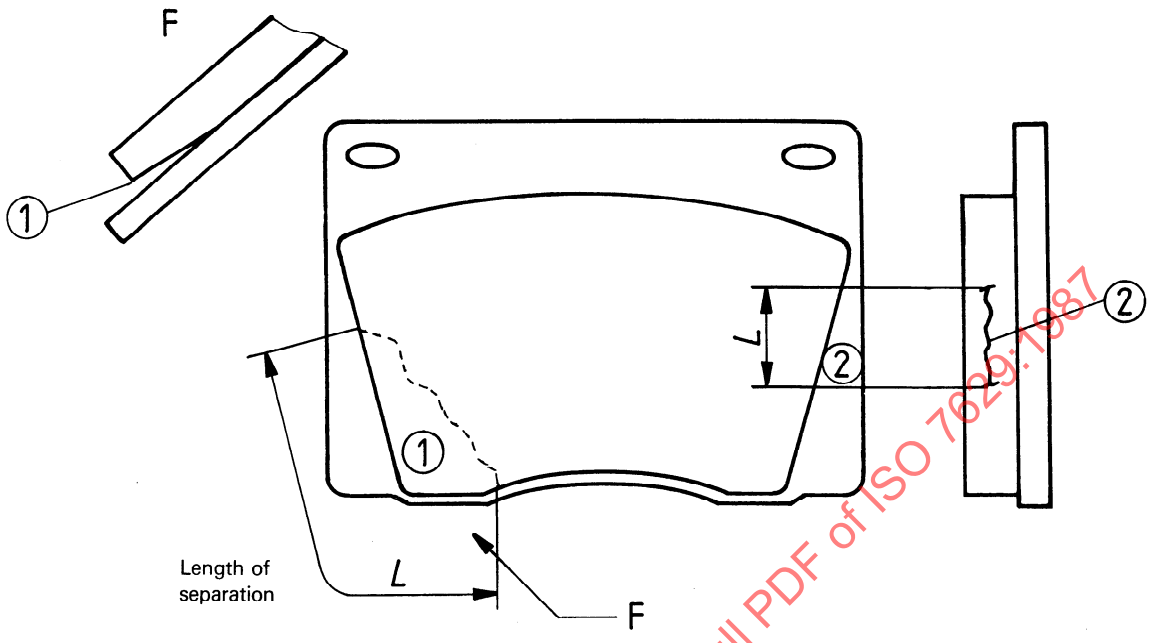

Figure 4 — Example of lining separation from support and material lamina separation (type IV flaw)

Dimensions in millimetres

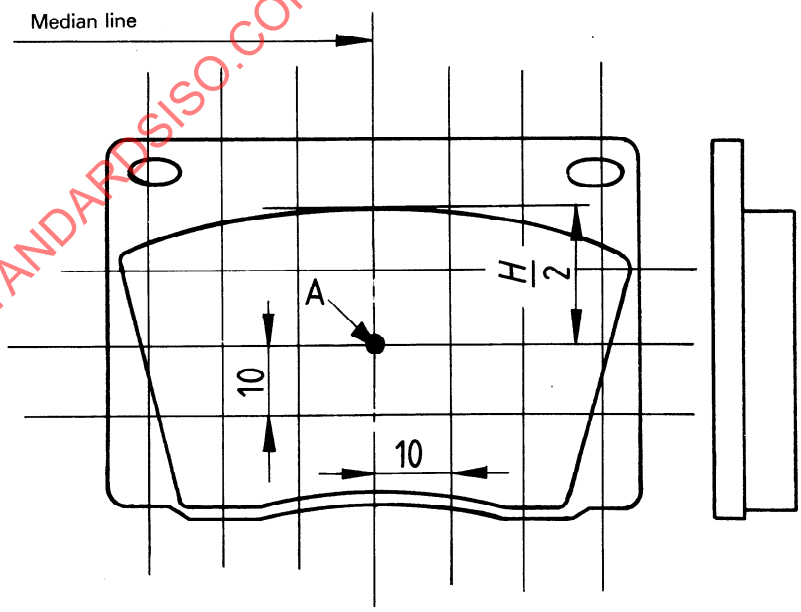

Figure 5 — Centring of the grid