Summary

According to an aspect, the present disclosure refers to a brake pad, the pad comprising a sole plate with an outer face and an inner face, and a lining made of friction material fixed to said inner face, the lining being delimited by a friction face, an attachment face, an inner edge, an outer edge, a rear edge, and a front edge, the lining being provided with at least one collection groove that is open on the friction face and is located at least in part near the rear edge, the sole plate comprising at least one suction hole in fluid communication with said at least one collection groove, said at least one suction hole being connected to a negative pressure source via communication means, said at least one collection groove being characterized in that it is extended, at at least one of its ends, by a duct of which the outer end is open away from said friction face, via an inlet, and of which the inner end is open in said at least one collection groove via an outlet which forms a cross-sectional jump with said at least one groove such that, during operation, a negative pressure exists between said inlet of the duct and said at least one collection groove one on each side of said duct, said outer end being open in the region of the at least one among said edges which is closest to said sole plate and which is not consumed at the end of the normal operating life of said pad, said region extending over a certain percentage of the height of said lining measured from said sole plate.

In an example, the present disclosure relates to a brake pad comprising a sole plate with an outer face and an inner face, and a lining made of friction material fixed to the inner face, the lining being delimited by a friction face, an attachment face, an inner edge, an outer edge, a rear edge, and a front edge, the lining being provided with at least one collection groove that is open on the friction face and is located at least in part near the rear edge, the sole plate comprising at least one suction hole in fluid communication with the at least one collection groove, the at least one suction hole being connected to a negative pressure source via communication means.

The present disclosure aims to provide a brake pad provided

with a collection groove, for which the suction performance remains substantially constant as the lining of the pad wears.

This object is achieved by virtue of the fact that the collection groove is extended, at at least one of its ends, by a duct of which the outer end is open away from the friction face, via an inlet, and of which the inner end is open in at least one collection groove via an outlet which forms a cross-sectional jump with at least one groove such that, during operation, a negative pressure exists between the inlet of the duct and at least one collection groove one on each side of the duct.

With these arrangements, the suction performance by the collection groove remains substantially constant, in other words has little variation as the lining of the pad wears, as has been shown in the tests carried out by the inventors.

Advantageously, the outer end is open at least in the vicinity of one of the edges.

For example, the outer end is open in the region of the at least one of the edges which is closest to the sole plate and which is not consumed at the end of the normal operating life of the pad.

The cross-sectional area of the duct thus remains constant throughout the life of the pad.

Advantageously, the duct passes through the sole plate, the outer end opening onto the outer face of the sole plate.

The manufacture of the pad is thus simplified.

Advantageously, the collection groove consists of a single groove which runs along the rear edge.

Advantageously, the collection groove also runs along the front edge.

CLAIMS

1. Brake pad, the pad comprising a sole plate with an outer face and an inner face, and a lining made of friction material fixed to said inner face, the lining being delimited by a friction face, an attachment face, an inner edge, an outer edge, a rear edge, and a front edge, the lining being provided with at least one collection groove that is open on the friction face and is located at least in part near the rear edge, the sole plate comprising at least one suction hole in fluid communication with said at least one collection groove, said at least one suction hole being connected to a negative pressure source via communication means, said at least one collection groove being characterized in that it is extended, at at least one of its ends, by a duct of which the outer end is open away from said friction face, via an inlet, and of which the inner end is open in said at least one collection groove via an outlet which forms a cross-sectional jump with said at least one groove such that, during operation, a negative pressure exists between said inlet of the duct and said at least one collection groove one on each side of said duct, said outer end being open in the region of the at least one among said edges which is closest to said sole plate and which is not consumed at the end of the normal operating life of said pad, said region extending over a certain percentage of the height of said lining measured from said sole plate.

2. Brake pad according to claim 1, wherein said at least one collection groove consists of a single groove which runs along said rear edge.

3. Brake pad according to claim 2, wherein said at least one collection groove also runs along said front edge.

4. Brake pad according to claim 3, wherein said collection groove is C-shaped or E-shaped and runs along said outer edge or said inner edge.

5. Brake pad according to claim 1, wherein said at least one collection groove consists of a plurality of separate grooves including a first groove which runs along said rear edge.

6. Brake pad according to claim 5, wherein said plurality of grooves is two in number.

7. Brake pad according to any one of claims 5 to 6, wherein one of said at least one duct extends between one end of one groove and one end of another groove among the plurality of grooves.