However, when the friction material comes into contact with the disk when the latter is rotating, the friction material emits particles that are harmful to human health and the environment. The braking systems are thus polluting.

This is why a suction device is known to be arranged to aspirate the particles generated by the braking in the braking system. The suction device is intended to aspirate the braking particles shortly after the emission thereof.

However, the suction device is mainly designed to operate when the brake pad is in a "factory" configuration. Thus, during the use thereof, the aspiration of the braking particles can become less efficient.

Purpose of the invention

One purpose of the invention is to provide a brake pad for a disk brake assembly, the performance levels whereof remain constant over time.

Summary

For this purpose, according to a first aspect, the present disclosure refers to a brake pad for a disk brake assembly of a vehicle, comprising a lining made of friction material and a plate supporting the lining, wherein:

- the lining comprises:

-- a friction face and a fastening face,

-- a rear edge located on a side where the disk is able to come out of an interface with the pad when the disk rotates in a direction of forward travel of the vehicle, and a front edge,

-- an inner edge and an outer edge, and

-- a collection groove that opens into the friction face and is arranged close to the rear edge, the collection groove opening out onto one of either the inner or outer edges,

- the plate including a hole in fluid communication with the collection groove, the hole being connected to a source of negative pressure via communication means, characterized in that the collection groove (3) extends between an open end (31) and a blind end (33), the hole (17) of the plate (20) opening out into the collection groove

(3) close to the blind end (33),

~~characterized~~ and in that the lining includes a rear region including the rear edge and the collection groove, and a front region including the front edge, the front region including a chamfered portion such that an area of a friction surface of the front region increases as a thickness of the front region decreases.

CLAIMS

1. Brake pad for a disk brake assembly of a vehicle, comprising a lining made of friction material and a plate supporting the lining, wherein:

- the lining comprises:

-- a friction face and a fastening face,

-- a rear edge located on a side where the disk is able to come out of an interface with the pad when the disk rotates in a direction of forward travel of the vehicle, and a front edge,

-- an inner edge and an outer edge, and

-- a collection groove that opens into the friction face and is arranged close to the rear edge, the collection groove opening out onto one of either the inner edge or the outer edge,

- the plate including a hole in fluid communication with the collection groove, the hole being connected to a source of negative pressure via communication means, characterized in that the collection groove extends between an open end and a blind end, the hole of the plate opening out into the collection groove close to the blind end, ~~characterized~~ and in that the lining includes a rear region including the rear edge and the collection groove, and a front region including the front edge, the front region including a chamfered portion such that an area of a friction surface of the front region increases as a thickness of the front region decreases.

2. Brake pad according to the preceding claim, wherein the rear region comprises a chamfered portion such that an area of a friction surface of the rear region increases as a thickness of the rear region decreases such that, for the same decrease in thickness, the area of the friction surface of the rear region increases relatively less than the area of the friction surface of the front region.

3. Brake pad according to claim 2, wherein an area of the chamfered portion of the rear region is smaller than an area of the chamfered portion of the front region.

4. Brake pad according to any of claims 2 and 3, wherein the chamfered portions of the rear region and front region are planar, an angle formed between the chamfered

portion of the rear region and a plane comprising the fastening face is greater than an angle formed between the chamfered portion of the front region and the plane comprising the fastening face.

5. Brake pad according to any of claims 2 to 4, wherein the chamfered portion of the rear region includes an outer border and an inner border, the inner border having a relatively shorter length than a length of the outer border.

6. Brake pad according to any of the preceding claims, wherein the chamfered portion of the front region includes an outer border and an inner border, the inner border having a relatively shorter length than a length of the outer border.

7. Brake pad according to claim 1, wherein the rear region includes two walls, one whereof bears a friction surface of the rear region, the two walls comprising a common rim and substantially forming a right angle therebetween.

8. Brake pad according to any of the preceding claims, wherein the collection groove is disposed at a distance from the rear edge of less than 10 millimeters.

9. Brake pad according to any of the preceding claims, wherein the collection groove is directly hollowed out of the friction material, as far as the surface of the plate.

~~10. Brake pad according to any of the preceding claims, wherein the collection groove extends between an open end and a blind end, the hole of the plate opening out into the collection groove close to the blind end.~~

~~11~~10. Disk brake assembly including a disk and two brake pads according to any of the preceding claims, disposed on either side of the disk.

~~12~~11. Disk brake system comprising a disk brake assembly according to the preceding claim, wherein the disk is integral with an axle or with a wheel.