Claims

1. Friction assembly for a braking system for railway rolling stock, said friction assembly comprising:

a brake head comprising a lower face, an upper face, and at least one secondary channel having a central axis A, the at least one secondary channel connecting connects said lower face and an upper face;

at least one plate made of a friction material and comprising a first face which is the friction face, a second face which is adapted to be fixed on said lower face by a fixing mechanism, and at least one primary channel, wherein the at least one primary channel connects said first face to said second face;

at least one connecting ring, a respective ring of the at least one connecting ring being arranged in a respective secondary channel of said at least one secondary channel;

a manifold block connected to a suction device and being integral with the manifold block at said upper face, said manifold block having a cavity which is connected to the suction device and which comprises at least one hole, the at least one hole connecting said cavity to said upper face, and a respective hole of the at least one hole being aligned with a respective secondary channel of the at least one secondary channel, wherein a respective connecting ring of the at least one ring is configured to slide in a respective hole of the at least one hole; and

a securing mechanism for securing said at least one connecting ring to said manifold block when said at least one connecting ring is arranged in said at least one hole and in said at least one secondary channel.

2. Friction assembly according to claim 1, wherein said at least one connecting ring comprises:

a body having a first end and a second end opposite the first end;

a flange arranged at the first end of said body; and

tabs arranged at the second end of said body; the tabs extending radially outwards in said cavity,

wherein said securing mechanism comprises said flange, said tabs, and an internal edge of said at least one hole of said cavity.

3. Friction assembly according to claim 1, wherein said at least one connecting ring comprises:

a body having a first end and a second end opposite the first end;

a flange arranged at the first end of said body; and

tabs arranged at the second end of said body, the tabs being plastically deformed radially outwards in said cavity,

wherein said securing mechanism comprises said flange, said tabs, and an internal edge of said at least one hole of said cavity.

4. Friction assembly according to claim 1, wherein said at least one connecting ring comprises:

a body having a first end and a second end opposite the first end;

a flange arranged at the first end of said body; and

at least one protuberance arranged at the second end of said body, the at least one protuberance extending radially outwards in said cavity, wherein said at least one hole carries at least one groove within which said at least one protuberance is adapted to slide, wherein an internal edge of said at least one hole of the cavity comprises a housing adapted to receive said protuberance, and wherein said securing mechanism comprises said flange, said protuberance, and said housing.

5. Friction assembly according to claim 1, further comprising a return mechanism which is adapted to press said connecting ring against said second face.

6. Friction assembly according to claim 1, wherein said fixing mechanism comprises a receiving slide which is formed on said lower face, and a dovetail section which is formed on said second face and which is configured to engage with said receiving slide.

7. Method for securing at least one connecting ring mounted on a brake head to a manifold block connected to a suction device, said brake head comprising a

lower face, an upper face, and at least one secondary channel having a central axis A, said block forming an integral part of said brake head at said upper face, the brake head and said connecting ring forming part of a friction assembly for a braking system for railway rolling stock, said friction assembly further comprising a plate made of friction material comprising a first face which is the friction face, a second face which is adapted to be fixed to said lower face by a fixing mechanism, and at least one primary channel, the at least one primary channel connecting said first face and said second face, said at least one connecting ring being arranged in said at least one secondary channel,

said method comprising the following steps:

providing said manifold block with a cavity which is connected to the suction device, and with at least one hole which connects said cavity to said upper face and which is aligned with said at least one secondary channel and in which said at least one connecting ring is adapted to slide;

positioning said at least one connecting ring in said at least one hole and in said at least one secondary channel by sliding the at least one connecting ring along the central axis A from said lower face;

securing said at least one connecting ring to said manifold block by means of a securing mechanism;

assembling said plate onto said brake head until said plate covers said at least one connecting ring.

8. Method according to claim 7, wherein said at least one connecting ring comprises:

a body having a first end and a second end opposite the first end;

a flange arranged at the first end of said body; and

tabs arranged at the second end of said body; the tabs extending radially outwards in their rest positions,

wherein, in the step “positioning said at least one connecting ring”, said tabs approach each other elastically when said body slides in said at least one hole and in said at least one secondary channel, and

wherein in step “securing said at least one connecting ring”, said tabs return to their rest positions and are able to bear against an internal edge of said at least one hole of said cavity, said securing mechanism comprising said flange, said tabs, and said internal edge of the at least one hole.

9. Method according to claim 7, wherein the at least one connecting ring comprises:

a body having a first end and a second end opposite the first end;

a flange arranged at the first end of said body; and

tabs arranged at the second end of said body; the tabs extending substantially as an extension of said body in their rest positions,

wherein, in the step “positioning said at least one connecting ring”, said body slides freely in said at least one hole and in said at least one secondary channel, and

wherein in step “securing said at least one connecting ring”, said tabs are crushed against a bottom of said cavity such that said tabs are plastically deformed radially outwards and are able to bear against an internal edge of said at least one hole of said cavity, said securing mechanism comprising said flange, said tabs, and said internal edge of the at least one hole.

10. Method according to claim 7, wherein the at least one connecting ring comprises:

a body having a first end and a second end opposite the first end;

a flange arranged at the first end of said body; and

at least one protuberance which extends radially outwards, wherein said at least one hole carries at least one groove in which said at least one protuberance is adapted to slide, and wherein an internal edge of said at least one hole comprises a housing adapted to receive said at least one protuberance,

wherein in the step “positioning said at least one connecting ring”, said body slides freely in said at least one hole and in said at least one secondary channel until the second end of said body emerges into said cavity, and

wherein in step “securing said at least one connecting ring”, said connecting ring is pivoted about the central axis A until one of said at least one protuberance is located facing said housing, then said ring is slid in the opposite direction until one of said protuberance is housed in said housing and bears against a bottom of the housing, said securing mechanism comprising said flange, said at least one protuberance, and said housing.