Patent claims

1. A holding brake (20) for a lift installation (10), comprising brake shoes (23.1, 23.2), which are actuable by means of actuators (31.1, 31.2) and which in the case of braking produce a braking force at a guide rail (17) of the lift installation (10), characterized in that a locking mechanism (21) with a traction device (24) is provided, wherein the brake shoes (23.1, 23.2) are arranged at a cross member (29) which in the case of braking is movable relative to the traction device (24) and wherein the traction device (24), by means of a relative movement with respect to the cross member (29), amplifies the braking force of the brake shoes (23.1, 23.2) at the guide rail (17).

2. The holding brake (20) as claimed in claim 1, characterized in that the locking mechanism (21) is a double-acting locking mechanism (21) comprising a first brake body (22.1) and a second brake body (22.2) which are arranged opposite one another, wherein the first brake body (22.1) has a first one of the brake shoes (23.1) at a side facing the second brake body (22.2) and wherein the second brake body (22.2) has a second one of the brake shoes (23.2) at a side facing the first brake body (22.1).

3. The holding brake (20) as claimed in claim 1 or 2, characterized in that the locking mechanism (21) comprises a traction device (24) acting at one side.

4. The holding brake (20) as claimed in claim 3, characterized in that the traction device (24) is arranged symmetrically with respect to the first brake body (22.1) and the second brake body (22.2) and two traction elements (24.1, 24.2) of the traction device (24) are connected with the first brake body (22.1) and two further traction elements (24.3, 24.4) of the traction device (24) are connected with the second brake body (22.2).

5. The holding brake (20) as claimed in any one of the preceding claims, characterized in that it comprises a fastening element (25) and a guide body (26), wherein the fastening element (25) is designed for fastening the holding brake (20) to the lift cage (12) and the guide body (26) is mounted to be displaceable along the fastening element (25).

6. The holding brake (20) as claimed in claim 5, characterized in that the first brake body (22.1) and the second brake body (22.2) are movably mounted on the guide body

(26) such that they are movable towards and away from one another.

7. The holding brake (20) as claimed in any one of the preceding claims, characterized in that it comprises an actuator (31.3; 32) for releasing the holding brake (20).

8. A lift installation (10) with a locking mechanism (21) as claimed in any one of the preceding claims.

9. A method of operating a lift installation (10) as claimed in claim 8, characterized by the following steps:

- engaging the brake shoes (23.1, 23.2) by means of actuators (31.1, 31.2, 32) for fixing the lift cage (12) or the counterweight (19) at the guide rail (17) and
- exerting an additional braking force by means of a locking mechanism (21) in the case of an impermissible movement of the lift cage (12) or of the counterweight (19), wherein a locking mechanism (21) with a traction device (24) is provided, wherein the brake shoes (23.1, 23.2) are arranged at a cross member (29) which in the case of braking is movable relative to the traction device (24) and wherein the traction device (24), in the case of a relative movement with respect to the cross member (29), amplifies the braking force of the brake shoes (23.1, 23.2) at the guide rail (17).

10. The method as claimed in claim 9, characterized in that the following steps are performed for releasing the holding brake (20):

- building up a holding force by a drive (11) whilst the locking mechanism (21) diminishes the holding force,
- releasing the brake shoes (23.1, 23.2) when sufficient holding force by the drive (11) is present and
- holding the lift cage (12) or the counterweight (19) in a rest position by the drive (11).

Patent claims

1. A holding brake (20) for a lift installation (10), comprising brake shoes (23.1, 23.2), which are actuable by means of actuators (31.1, 31.2) and which in the case of braking produce a braking force at a guide rail (17) of the lift installation (10), characterized in that a locking mechanism (21) with a traction device (24) is provided, wherein the brake shoes (23.1, 23.2) are arranged at a cross member (29) which in the case of braking is movable relative to the traction device (24) and wherein the traction device (24), by means of a relative movement with respect to the cross member (29), amplifies the braking force of the brake shoes (23.1, 23.2) at the guide rail (17).

2. The holding brake (20) as claimed in claim 1, characterized in that the locking mechanism (21) is a double-acting locking mechanism (21) comprising a first brake body (22.1) and a second brake body (22.2) which are arranged opposite one another, wherein the first brake body (22.1) has a first one of the brake shoes (23.1) at a side facing the second brake body (22.2) and wherein the second brake body (22.2) has a second one of the brake shoes (23.2) at a side facing the first brake body (22.1).

3. The holding brake (20) as claimed in claim 1 or 2, characterized in that the locking mechanism (21) comprises a traction device (24) acting at one side.

4. The holding brake (20) as claimed in claim 3, characterized in that the traction device (24) is arranged symmetrically with respect to the first brake body (22.1) and the second brake body (22.2) and two traction elements (24.1, 24.2) of the traction device (24) are connected with the first brake body (22.1) and two further traction elements (24.3, 24.4) of the traction device (24) are connected with the second brake body (22.2).

5. The holding brake (20) as claimed in any one of the preceding claims, characterized in that it comprises a fastening element (25) and a guide body (26), wherein the fastening element (25) is designed for fastening the holding brake (20) to the lift cage (12) and the guide body (26) is mounted to be displaceable along the fastening element (25).

6. The holding brake (20) as claimed in claim 5, characterized in that the first brake body (22.1) and the second brake body (22.2) are movably mounted on the guide body

(26) such that they are movable towards and away from one another.

7. The holding brake (20) as claimed in any one of the preceding claims, characterized in that it comprises an actuator (31.3; 32) for releasing the holding brake (20).

8. A lift installation (10) with a locking mechanism (21) as claimed in any one of the preceding claims.

9. A method of operating a lift installation (10) as claimed in claim 8, characterized by the following steps:

- engaging the brake shoes (23.1, 23.2) by means of actuators (31.1, 31.2, 32) for fixing the lift cage (12) or the counterweight (19) at the guide rail (17) and
- exerting an additional braking force by means of a locking mechanism (21) in the case of an impermissible movement of the lift cage (12) or of the counterweight (19), wherein a locking mechanism (21) with a traction device (24) is provided, wherein the brake shoes (23.1, 23.2) are arranged at a cross member (29) which in the case of braking is movable relative to the traction device (24) and wherein the traction device (24), in the case of a relative movement with respect to the cross member (29), amplifies the braking force of the brake shoes (23.1, 23.2) at the guide rail (17).

10. The method as claimed in claim 9, characterized in that the following steps are performed for releasing the holding brake (20):

- building up a holding force by a drive (11) whilst the locking mechanism (21) diminishes the holding force,
- releasing the brake shoes (23.1, 23.2) when sufficient holding force by the drive (11) is present and
- holding the lift cage (12) or the counterweight (19) in a rest position by the drive (11).