Claims

1. Method for forming a hollow-profile guide rail (101) of an elevator system, comprising:
- providing a plurality of portions (101a, 101b) of the guide rail (101),
- arranging adjacent portions (101a, 101b) in a longitudinal direction (9) one above the other and mutually aligned,
- smoothing mutually opposing surfaces (109, 111) on the hollow profile of the guide rail (101) by means of inserting a smoothing apparatus (1) between the mutually opposing surfaces (109, 111) of the guide rail (101) such that the guide device (3) rests against a first (109) of the surfaces (109, 111) and the removal device (5) rests against a second (111) of the surfaces (109, 111), wherein
the smoothing apparatus (1) comprises:
a guide device (3),
a removal device (5), and
a pressing device (7),
wherein the guide device (3) is designed to be moved in a low-friction manner in a longitudinal direction (9) along a first (109) of the opposing surfaces (109, 111) and to thus guide the smoothing apparatus (1) along the first surface (109),
wherein the pressing device (7) is designed to press the removal device (5) away from the guide device (3) and toward a second (111) of the opposing surfaces (109, 111), and
wherein the removal device (5) is designed to remove material from the second surface (111) during a movement in the longitudinal direction (9) along the second surface (111), and
- displacing the smoothing apparatus (1) in a longitudinal direction (9) along the first surface (109).

2. Method according to Claim 1,
wherein the guide device (3) of the smoothing apparatus (1) has at least two bearing devices (11) which are arranged and configured such that the smoothing apparatus (1) is to be placed with bearing surfaces (13) of each of the two bearing devices (11) onto the first surface (109) and to be moved in a low-friction manner along the first surface (109) in order to guide the smoothing apparatus (1) along the first surface (109).

3. Method according to Claim 2,
wherein the two bearing devices (11) are arranged spaced apart in relation to the longitudinal direction (9).

4. Method according to one of the preceding claims,

wherein the guide device (3) has at least one roller (15) which is arranged and configured such that the smoothing apparatus (1) is to be placed with a circumferential surface (17) of the roller (15) onto the first surface (109) and is to be rolled along the first surface (109) in order to guide the smoothing apparatus (1) along the first surface (109).

5. Method according to Claim 4,
wherein the guide device (3) has at least two rollers (15) which are arranged and configured such that the smoothing apparatus (1) is to be placed with a respective circumferential surface (17) of the rollers (15) onto the first surface (109) and is to be rolled along the first surface (109) in order to guide the smoothing apparatus (1) along the first surface (109).

6. Method according to one of the preceding claims,
wherein the removal device (5) is designed to contact the second surface (111) of the guide rail (101) along a plane at a plurality of points spaced apart from one another in the longitudinal direction (9) and to contact the second surface (111) with at least one sharp-edged removal component (19) in order to remove material from the second surface (111) during the movement in the longitudinal direction (9) along the second surface (111).

7. Method according to one of the preceding claims,
wherein the removal device (5) has a plurality of sharp-edged removal components (19) which are designed to contact the second surface (111) of the guide rail (101) along a plane at a plurality of contact points spaced apart from one another in the longitudinal direction (9), in order to remove material from the second surface (111) during the movement in the longitudinal direction (9) along the second surface (111).

8. Method according to one of Claims 6 and 7, wherein the removal component (5) has, in a direction transverse to the longitudinal direction (9), a width (b) that corresponds to at least one width (b) of the second surface (111) to be smoothed.

9. Method according to one of the preceding claims,
wherein the removal device (5) is a passive, inherently rigid component.

10. Method according to one of the preceding claims,
wherein the removal device (5) is held stationary relative to the guide device (3) in a direction parallel to the longitudinal direction (9), and wherein the removal device (5) is held displaceably relative to

the guide device (3) in a direction transverse to the longitudinal direction (9) away from the guide device (3).

11. Method according to one of the preceding claims,
wherein the pressing device (7) has at least one elastic spring element (21) which is mounted on the guide device (3) and on the removal device (5).

12. Method according to one of the preceding claims,
wherein the pressing device (7) has at least two elastic spring elements (21) which are each mounted on the guide device (3) and on the removal device (5) and which are arranged spaced apart from one another in the longitudinal direction (9).