Claims

1. A mounting device (1) for performing an assembly job in an elevator shaft (103) of an elevator system (101), said mounting device comprising:
a support component (3);
a mechatronic assembly component (5) comprising an industrial robot adapted to be coupled with various mounting tools (9) at a cantilever end (8) of the robot;
wherein the support component (3) is adapted to be moved relative to the elevator shaft (103) and to be positioned at different heights within the elevator shaft (103);
wherein the assembly component (5) is held at the support component (3) and adapted to perform a mounting step as part of the assembly job in at least a partially automatic manner.

2. Mounting device according to claim 1, further comprising a positioning component (21) which is adapted to determine at least one of a position and an orientation of the mounting device (1) within the elevator shaft (103).

3. Mounting device according to claim 1 or 2, wherein the assembly component (5) is adapted to carry out several different types of mounting steps in at least a partially automatic manner.

4. Mounting device according to claim 3, wherein the assembly component (5) is adapted to pick up the mounting tools (9) used for the different types of mounting steps prior to the performance of the mounting step.

5. Mounting device according to claim 3 or 4, furthermore comprising a tool magazine component (14), wherein the tool magazine component (14) is adapted to store various mounting tools (9) and to provide them to the assembly component (5).

6. Mounting device according to one of claims 1 to 5, whereby the assembly component (5) is adapted to perform at least one of the following mounting steps:
- at least a partially automatically controlled drilling of holes in a wall (105) of the elevator shaft (103);
- at least partially automated driving of screws into holes in a wall (105) of the elevator shaft (103);
- at least partially automatic mounting of components on the wall (105) of the elevator shaft (103).

7. Mounting device according to one of claims 1 to 6, furthermore comprising a displacement component (15) adapted to move the support component (3) vertically within the elevator shaft (103).

8. Mounting device according to claim 7, wherein the displacement component (15) is fixed on one of the support components (3) and a stop (107) on top of the elevator shaft (103), comprising carrier means (17) that are strong under tension and flexible, the one end of which is held at the displacement component (15) and the other end is fixed at another of the support component (3) and the stop (107) on top of the elevator shaft (103) in which the displacement component (15) can move the support component (3) within the elevator shaft (103) by moving the carrier means (17).

9. Mounting device according to claim 7, wherein the displacement component (15) is attached to the support component (3) and is adapted to exert a force on a wall (105) of the elevator shaft (103) by moving a motion component to move the support component (3) within the elevator shaft (103) by moving the motion component along the wall.

10. Mounting device according to one of claims 1 to 9, wherein the support component (3) comprises a fixing component (19) adapted to fix at least one of the support components (3) and the assembly component (5) within the elevator shaft (103) in a direction transversely to the vertical.

11. Mounting device according to one of claims 1 to 10, furthermore comprising a reinforcement detection component (23) adapted to detect a reinforcement within a wall (105) of the elevator shaft (103).

12. Method for performing an assembly job in an elevator shaft (103) of an elevator system (101), comprising:
introduction of a mounting device (1) according to one of claims 1 to 10 in the elevator shaft (103);
controlled displacement of the mounting device (1) within the elevator shaft (103);
at least partially automatic performance of the mounting step by means of the mounting device (1).