CLAIMS

1. A method (200) for commissioning a door system (60, 61, 62), wherein the door system (60, 61, 62) has at least one door component (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), wherein the commissioning comprises the following method step:

   a. carrying out an electronically defined test process of the door system (60, 61, 62).

characterized in that the test process comprises a plurality of test steps and/or a plurality of test functions, wherein the sequence of the test steps and/or test functions is stored electronically in the test process, wherein the test process is defined for a preconfigured door system type.

2. The method (200) according to claim 1, wherein the electronically defined test process comprises carrying out at least one test step, wherein the test step corresponds to an operating step which is carried out by means of the door system (60, 61, 62) during operation of the door system (60, 61, 62), in particular wherein at least the test step is designed as:

- a motorized door opening,
- a motorized door closure,
- a motorized door stop,
- an electrically performed door unlocking,
- an electrically performed door lock,
- electrically establishing a requirement for manual unlocking and/or locking or
- a visual or acoustic indication of a state of the door system.

3. The method according to claim 2, wherein the test process comprises a plurality of test steps, wherein the sequence of the test steps is stored electronically in the test process, wherein the sequence of the plurality of test steps is carried out automatically and/or in a predefined order one after the other.

4. The method (200) according to one of the preceding claims, wherein the door system (60, 61, 62) comprises a plurality of door components (29, 30, 31,

33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), wherein the electronically defined test process comprises carrying out at least one test function, wherein the test function comprises a functional interaction of a plurality of door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), wherein the test function corresponds to an operating function that is carried out by means of the door system (60, 61, 62) during operation of the door system (60, 61, 62), in particular wherein at least the test function for carrying out the test function comprises the interaction of the following door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59):

- a signal transmitter (30, 37, 38, 51, 53, 56, 57) and a door drive (35, 36)
- a signal transmitter (30, 37, 38, 51, 53, 56, 57) and a locking device (33, 34, 52, 59)
- a plurality of door drives (35, 36)
- a plurality of locking devices (33, 34, 52, 59)
- at least one door drive (35, 36) and at least one locking device (33, 34, 52, 59)

5. The method according to claim 4, wherein the test process comprises a plurality of test functions, wherein the sequence of the test functions is stored electronically in the test process, wherein the sequence of the test functions is carried out automatically and/or in a predefined order one after the other.

6. The method (200) according to one of the preceding claims, wherein the test function requires an action by a user, wherein it is displayed or output on a mobile terminal (50) of an installer, which action the installer has to perform in order for the test function to be successful, in particular wherein the action comprises a local positioning of the installer, an actuation of a door component (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), an opening and/or closing of the door and/or an authentication of the installer.

7. The method (200) according to claim 6, wherein the mobile terminal (50) displays or outputs the action that the installer has to perform in order for the test function to be successful in the form of plain text, wherein in particular the installer can make inputs in plain text in the mobile terminal (50), so that the mobile terminal (50) can, if necessary, instruct a repetition of the action or another action

from a test process for testing the door system (60, 61, 62).

8. The method (200) according to one of claims 6 or 7, wherein the mobile terminal (50) comprises a typeset-based database and/or an AI-based assistance system, through which

a. the mobile terminal (50) translates into plain text actions stored in machine language that the installer has to perform in order for the test function to be successful, and/or

b. the mobile terminal (50) translates into machine language inputs entered by the installer in plain text in order to process them and in particular to carry out a further test step of a test process.

9. The method according to one of claims 6 to 8, wherein the mobile terminal (50) has a voice processing device, wherein the output of plain text by the mobile terminal (50) to the installer comprises a voice output and/or the mobile terminal (50) detects and processes a voice input in plain text by the installer as an input.

10. The method (200) according to one of the preceding claims, wherein the mobile terminal (50) displays or outputs a time interval in which the installer has to perform the action and/or wherein the installer has to perform a plurality of actions, wherein the order of the actions and, if necessary, the time intervals for carrying out the actions are displayed or output to the installer by the mobile terminal (50).

11. The method (200) according to one of the preceding claims, wherein the door system (60, 61, 62) comprises a plurality of door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), wherein a functional interaction of the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) can be verified by means of the test process, wherein the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) are provided to be arranged on a plurality of doors and/or the door components are designed differently from one another, wherein a functional interaction of the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) can be verified by means of the test process.

12. The method (200) according to one of the preceding claims, wherein at least one desired test result is stored in the electronically stored test process, wherein the result of a test step, a test function or the test process can be determined using a sensor (37, 38, 56, 57) and/or a control device (35, 36, 51) of the door system, wherein the desired test result is compared electronically with the determined test result and/or a test run, a test function or a test step is positively completed by means of the mobile terminal (50) in that the result to be expected is displayed or output by the mobile terminal (50) and confirmed by way of an input.

13. The method (200) according to one of the preceding claims, wherein, if a comparison of the desired test result with the determined test result is negative, a fault is searched for electronically by the door system (60, 61, 62), in particular by a control unit (30) of the door system, wherein in particular the error and/or a troubleshooting option is displayed or output by the mobile terminal (50), wherein the troubleshooting option comprises replacing a door component (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) and/or setting a parameter by the installer, in particular wherein the parameter is set on the mobile terminal (50) and/or wherein an immediate input option for setting the parameter that is used for troubleshooting is a troubleshooting option.

14. The method (200) according to one of claims 12 or 13, wherein if a comparison of the desired test result with the determined test result is negative, the completion of the commissioning of the door system (60, 61, 62) is denied, wherein a repetition of the test process at the end of commissioning is only possible by means of the stored test process and/or wherein, if at least for a first test function, for which the comparison of the desired test result with the test result of the test function carried out is negative, and for at least one second test function, for which the comparison of the desired test result with the test result of the test function carried out is positive, the first test function is to be repeated, wherein the second test function is not to be repeated.

15. The method (200) according to one of the preceding claims, that the result of the successful, positive test process is stored in a door arrangement (100), in particular in a computing unit (10), and/or a test process log is created, wherein

the test process log can be electronically signed by the installer and/or by an inspector.

16. The method (200) according to one of the preceding claims, wherein the test process is stored in an electronic control unit (30) of the door system (60, 61, 62) and/or in a mobile terminal (50), wherein the control unit (30) and/or the mobile terminal (50) controls the test process and/or comprises an in particular wireless interface to the mobile terminal.

17. The method (200) according to one of the preceding claims, wherein at least a plurality of the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), which are verified by means of the test process, are connected to a first bus system (32), wherein in particular the control unit (30) is connected to the first bus system (32), wherein the control unit (30) receives via the first bus system (32) a behavior and/or a state of the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) involved in the test process.

18. The method (200) according to one of the preceding claims, wherein the door system (60, 61, 62) comprises a plurality of different door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59), wherein a functional interaction of the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) can be verified by means of the test process, wherein the functional interaction (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) corresponds to the cooperation of the door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) in the operation of the door system (60, 61, 62), wherein the cooperation is implemented by means of firmware, wherein the firmware is stored on the control unit (30) and/or wherein door components (29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 51, 52, 53, 56, 57, 58, 59) connected to the first bus system (32) cooperate by means of the firmware.

19. A door system (60, 61, 62) and/or door arrangement (100) for carrying out the method (200) according to one of claims 1 to 18.

20. A computer program product(s) for carrying out the method (200)

according to one of claims 1 to 18, wherein the at least one computer program product can be stored in the door system (60, 61, 62), in particular in the control unit (30), and/or in a mobile terminal (50).