Amended Claims

1. A flow-type concrete curing system, including a pre-fabricated member forming area (10) for storing a template to be cast with concrete, and a curing area (20) for curing the concrete,

characterized in that the flow-type concrete curing system further includes a track (4) and a lift carrier (3) movable along the track (4) for transferring the template, wherein the pre-fabricated member forming area (10) and the curing area (20) are both located in a path of the track (4), with the pre-fabricated member forming area (10) being located after the curing area (20);

the curing area (20) is provided with a closeable curing room (5), through which the track (4) passes, wherein the curing room (5) has a rear end with a rear door (51) through which the lift carrier (3) is accessible;

the lift carrier (3) includes a supporting frame (31), a bearing mechanism (32) mounted on the supporting frame (31) for bearing the template, and a lifting mechanism (33) for driving the bearing mechanism (32) to move up and down; and

the curing room (5) is provided therein with a heating device, at least one temperature probe, and at least one sensor for sensing the position of the template, wherein the front door (52) and the rear door (51) are each configured as an electrical roll gate.

2. The flow-type concrete curing system according to claim 1, characterized in that the track (4) consists of two parallel guide rails (41), one at the right and one at the left, in between which the pre-fabricated member forming area (10) is arranged, the pre-fabricated member forming area (10) being provided with several vibrating tables (2) therein.

3. The flow-type concrete curing system according to claim 2, characterized in that the flow-type concrete curing system further includes a concrete discharging car (1), which is arranged after the lift carrier (3) and movable along the track (4), the

concrete discharging car (1) having a discharging port (11), which is provided with a bracket (12) for supporting a concrete vessel (6) at each side thereof; and

the concrete discharging car (1) is provided a second trolley (13) at a bottom part of each side, and a third motor (15) for driving the second trolley (13) in movement, the second trolley (13) being mounted on the guide rail (41).

4. The flow-type concrete curing system according to claim 2, characterized in that the lift carrier (3) further includes a first trolley (34) arranged at a bottom of each side of the supporting frame (31), and a second motor (35) for controlling movement of the first trolley (34), the first trolley (34) being mounted on the guide rail (41); and

the supporting frame (31) includes two right and two left columns (311), beams (312) for connecting two adjacent columns (311), and diagonal rods (313) for connecting top parts of two columns arranged along a diagonal direction.

5. The flow-type concrete curing system according to claim 1, characterized in that before the curing room (5) is a template removing area (30), wherein the track (4) extends forwardly out of the curing room (5) to the template removing area (30);

the curing room (5) has a front end with a front door (52) through which the lift carrier (3) is accessible; and

two lift carriers (3) are provided, one before another, and used to transfer the template forwardly to the curing room (5), and to the template removing area (30) from the curing room (5), respectively.

6. The flow-type concrete curing system according to claim 5, characterized in that the track (4) is provided, at a side thereof and along a direction from front to back, with a template cleaning and painting area (40), a rebar tying area (50), a template assembling area (60), and a template stacking area (70), wherein the template stacking area (70) is located at a side of the pre-fabricated member forming area (10), and at a side of and before the template removing area (30) is a final pre-fabricated member

stacking area (80).

7. The flow-type concrete curing system according to claim 1, characterized in that the flow-type concrete curing system further includes a control device, which is in communication with the temperature probe, the sensor and electric actuators, and is used to control operations of the electric actuators.

8. The flow-type concrete curing system according to claim 1, characterized in that the curing room (5) has an openable or closable top, at the periphery of which a passageway (53) and an outer guide rail (54) are arranged, the passageway (53) being connected with a stairway leading to ground.

9. The flow-type concrete curing system according to any one of claims 1 to 6, characterized in that the bearing mechanism (32) includes a lifting frame (321), multiple bearing arms (322) mounted on the lifting frame (321), and a hydraulic cylinder (323) for controlling the bearing arms (322) to extend or retreat.

10. The flow-type concrete curing system according to claim 9, characterized in that the lifting mechanism (33) comprises a winding reel (331), a first motor (332) for controlling rotation of the winding reel (331), a pulling rope (333), and a fixed pulley (334) mounted on the supporting frame (31), wherein the pulling rope (333) has one end wound around the winding reel (331), and another end wound around the fixed pulley (334) to connect with the lifting frame (321).