Amended Claims

1. A roof cistern, including a floor, a wall and a cover (30),

wherein the floor and the wall are semi-prefabricated members, and include an integral housing consisting of a prefabricated floor (10) and a prefabricated wall (20), and a cast-in-situ floor (11) and a cast-in-situ wall (21) located inside the housing;

the cover (30) is a full-prefabricate member;

the prefabricated wall (20) is provided at an inner surface thereof with a fixing device extending inwardly for fixing an inner wall mold (40), and

portions of the prefabricated floor (10) and the prefabricated wall (20) for respective engagement with the cast-in-situ floor and the cast-in-situ wall each have a shape formed by convex and concave regions arranged alternately.

2. The roof cistern according to claim 1, wherein the prefabricated floor (10) is provided with floor reserved holes (10), through which support reserved reinforcing bars (501) of a roof support (50) pass respectively so as to connect the wall and the floor with the roof support (50); and

wherein the cover (30) is provided at a region for connection with the wall with cover reserved holes (301), through which wall reserved reinforcing bars (202) pass respectively so as to connect the cover (30) with the wall.

3. The roof cistern according to claim 1, wherein the fixing device is a mold screw (201).

4. The roof cistern according to any one of claims 1 to 3, wherein the cover (30) is provided with exposing reinforcing bars for connection with surrounding floor slabs.

5. The roof cistern according to any one of claims 1 to 3, wherein each of the prefabricated floor (10), the prefabricated wall (20) and the cover (30) is formed by splicing two or more prefabricated plates.

6. A method for manufacturing and constructing a roof cistern, comprising the

following steps:

Step S1, semi-prefabricating a floor and a wall required by the roof cistern, and forming an integral housing of the floor and the wall according to a size of the cistern at a factory, with a prefabricated wall (20) being provided with a fixing device for fixing an inner wall mold (40), wherein portions of the prefabricated floor (10) and the prefabricated wall (20) for respective engagement with the cast-in-situ floor and the cast-in-situ wall each have a shape formed by convex and concave regions arranged alternately;

Step S2, prefabricating a cistern cover (30) according to the size of the cistern at a factory;

Step S3, during construction of the roof cistern, placing the prefabricated wall (20) and the prefabricated floor (10) on a roof support (50), mounting a cistern support (60) on the support (50) and the prefabricated wall (20), binding reinforcing bars of cast-in-situ portions of the wall and the floor after adjustment of position of the cistern, mounting an inner wall mold (40), then casting concrete for the wall and the floor, and removing the inner wall mold (40) after the concrete is set; and

Step S4, placing the prefabricated cistern cover (30) on the wall, and after adjustment of position of the cover, closing the cistern with the cover (30).

7. The method according to claim 6, wherein

in Step S1, the prefabricated floor (10) is provided with floor reserved holes (101), through which support reserved reinforcing bars (501) pass respectively;

in Step S2 the cover (30) is provided at a region for connection with the wall with cover reserved holes (301), through which wall reserved reinforcing bars (202) pass respectively;

in Step S3 the support reserved reinforcing bars (501) pass through the floor reserved holes (101) respectively when the prefabricated floor (10) and the prefabricated wall (20) are placed on the roof support (50), so as to connect the wall and the floor with the roof support (50); and

in Step S4 the wall reserved reinforcing bars (202) pass through cover reserved holes (301) of the cover (30) when placing the cover (30) by hoist, so as to connect the cover (30) with the wall, and completing the casting between the cover reserved holes (301) and the wall reserved reinforcing bars (202).

8. The method according to claim 6 or 7, wherein

in Step S2 the cover (30) is provided with exposing reinforcing bars for connection with surrounding floor slabs; and

in Step S4 field reinforcing bars around the cover (30) are bounded, and then concrete is cast for surrounding floor slabs.

9. The method according to claim 6 or 7, wherein the prefabricated floor (10), the prefabricated wall (20) and the cover (30) are all produced by steel molds, and the inner wall mold is a steel mold.

10. The method according to claim 6 or 7, wherein each of the prefabricated floor (10), the prefabricated wall (20) and the cover (30) is formed by splicing two or more prefabricated plates.