

Claims

1. A long platform guy-wire hanging basket, comprising:

a load-bearing mechanism (1), which comprises a load-bearing end, the load-bearing mechanism (1) is arranged below a cast concrete section (2), and the load-bearing end can extend out of the cast concrete section (2);

a padlock mechanism (3), which comprises:

-at least one precast anchor block (31), which is arranged above an end portion of the load-bearing end, and a cable conduit (311) configured to install a stay cable (5) is provided in the precast anchor block (31);

-an anchoring part (32), which connects the precast anchor block (31) and the load-bearing end; and

a shearing mechanism (4) matched with the precast anchor block (31), two ends of which resist on the cast concrete section (2) and the precast anchor block (31).

2. The long platform guy-wire hanging basket according to claim 1, wherein the long platform guy-wire hanging basket further comprises a running mechanism (6), which is configured to extend the load-bearing end of the load-bearing mechanism (1) from below the cast concrete section (2).

3. The long platform guy-wire hanging basket according to claim 2, wherein the running mechanism (6) comprises:

two slideways (61), which are configured to be respectively arranged on two sides above the erected cast concrete section (2);

two C-shaped hooks (62), each of which comprises a sliding end and a connecting end, wherein the connecting end is connected with a middle portion of the load-bearing mechanism (1), and the sliding end is slidably arranged on the corresponding slideway (61); and

a pushing part, which is configured to push the C-shaped hooks (62) to slide on the slideways (61) so as to make the load-bearing end extends out of the cast concrete section (2).

4. The long platform guy-wire hanging basket according to claim 3, wherein the load-bearing mechanism (1) comprises:

two load-bearing trusses (11) arranged at intervals, which extend along a length direction of the cast concrete section (2);

a plurality of connecting trusses (12) arranged at intervals, which are arranged between the two load-bearing trusses (11), and the two ends are respectively connected with the two load-bearing trusses (11); and

two pairs of truss brackets (13), which are respectively arranged on outer sides of the two load-bearing trusses (11), and the connecting ends of the C-shaped hooks (62) are connected with the truss brackets (13).

5. The long platform guy-wire hanging basket according to claim 1, wherein the long platform guy-wire hanging basket further comprises: a hanging mechanism (7), one end of which is arranged at an end portion of the cast concrete section (2), and the other end is connected with the load-bearing mechanism (1) after the load-bearing end extends out of the cast concrete section (2), and can adjust a height of the load-bearing mechanism (1).

6. The long platform guy-wire hanging basket according to claim 5, wherein the hanging mechanism (7) comprises two sets of hanging units which are respectively arranged on two sides of the cast concrete section (2), and each set of the hanging units comprises:

an anchor hanger (71), one end of which is connected with the load-bearing mechanism (1), and the other end passes through the cast concrete section (2); and

a jacking part (72), which is arranged at one end of the anchor hanger (71) passing through most of the anchor hangers (71), and can lift or lower the anchor hanger (71) to adjust the height of the load-bearing mechanism (1).

7. The long platform guy-wire hanging basket according to claim 1, wherein the shearing mechanism (4) comprises:

a suspension mandrel (41), which is arranged between the cast concrete section (2) and the precast anchor block (31); and

two length-adjustable adjustment devices (42), which are respectively arranged at two ends of the suspension mandrel (41), and respectively resist on the cast concrete section (2) and the precast anchor block (31).

8. The long platform guy-wire hanging basket according to claim 1, wherein when the number of the precast anchor block (31) is one, the precast anchor block (31) is arranged in a middle portion of a transverse direction of the cast concrete section (2), and when the number of the precast anchor blocks (31) are two, the two precast anchor blocks (31) are respectively arranged below flange plates on two sides of the cast concrete section (2).

9. A construction method for a main girder section based on the long platform guy-wire hanging basket according to claim 1, comprising the following steps:

extending the load-bearing end of the load-bearing mechanism (1) out of the cast concrete section (2) to a preset position and anchoring same;

hoisting the precast anchor block (31) to the preset position above the load-bearing end, connecting the precast anchor block (31) and the load-bearing end by means of the anchoring part (32), and providing the shearing mechanism (4) between the cast concrete section (2) and the precast anchor block (31); and

once the stay cable (5) is installed to the cable conduit (311) and tensioned, casting concrete between the cast concrete section (2) and the precast anchor block (31) to complete the casting of the main girder section.

10. The construction method for the main girder section according to claim 9, wherein extending the load-bearing end of the load-bearing mechanism (1) out of the cast concrete section (2) to the preset position and anchoring same, comprising the following steps:

adopting a running mechanism (6) to extend the load-bearing end of the load-bearing mechanism (1) from below the cast concrete section (2) to the preset position;

connecting the load-bearing mechanism (1) with the end portion of the cast concrete section (2) by means of a hanging mechanism (7); and

adopting the hanging mechanism (7) to adjust the height of the load-bearing mechanism (1) and then removing the running mechanism (6).