CLAIMS

1. A vehicle body end underframe structure of a multiple-unit train, comprising

a coupler seat plate for installing a coupler;

a traction beam assembly provided at a rear side of the coupler seat plate and connected with the coupler seat plate, wherein the top of the traction beam assembly is configured to fixedly connect with a vehicle body underframe floor;

a coupler case provided at a front side of the coupler seat plate and connected with the coupler seat plate, wherein the top of the coupler case is configured to fixedly connect with the vehicle body underframe floor, a front end plate is provided on an end of the coupler case away from the coupler seat plate, and the front end plate is provided with a through hole allowing the coupler to pass through to work; and

a hoisting interface for hoisting external attached equipment, wherein the hoisting interface is provided on the traction beam assembly and/or the coupler case,

characterized in that

an installation surface, for cooperating with the external attached equipment, of the hoisting interface is arranged downward, a sliding groove corresponding to the installation surface is provided in the hoisting interface, the sliding groove is configured to place a sliding block, and a hoisting bolt extends into the sliding groove to cooperate with the sliding block to hoist the external attached equipment at the hoisting interface.

2. The vehicle body end underframe structure of the multiple-unit train according to claim 1, wherein the traction beam assembly comprises a traction beam, the traction beam comprises a traction beam top plate and two traction beam side plates, the traction beam top plate and the two traction beam side plates form a groove structure, and the traction beam top plate is configured to fixedly connect with the vehicle body underframe floor.

3. The vehicle body end underframe structure of the multiple-unit train according to claim 2, wherein the traction beam further comprises a lateral partition plate, two sides of the

lateral partition plate are respectively connected with the two traction beam side plates, and the lateral partition plate extends along a length direction of the traction beam.

4. The vehicle body end underframe structure of the multiple-unit train according to claim 2 or 3, wherein the traction beam top plate is provided with a through groove for increasing a welding position between the traction beam top plate and the vehicle body underframe floor.

5. The vehicle body end underframe structure of the multiple-unit train according to claim 2 or 3, wherein the coupler seat plate is of an I-shaped structure, the traction beam top plate is connected with an upper wing plate of the coupler seat plate, and the two traction beam side plates are connected with a web plate of the coupler seat plate.

6. The vehicle body end underframe structure of the multiple-unit train according to claim 5, wherein the traction beam top plate is connected with the upper wing plate of the coupler seat plate through a first transition connecting plate, and the first transition connecting plate is configured to fixedly connect with the vehicle body underframe floor.

7. The vehicle body end underframe structure of the multiple-unit train according to claim 6, wherein a side, away from the traction beam, of the upper wing plate of the coupler seat plate is connected with a second transition connecting plate, and the second transition connecting plate is configured to fixedly connect with the vehicle body underframe floor.

8. The vehicle body end underframe structure of the multiple-unit train according to claim 5, wherein a lower wing plate of the coupler seat plate is connected with a traction beam cover plate, and the traction beam cover plate is connected with the two traction beam side plates from bottom to top.

9. The vehicle body end underframe structure of the multiple-unit train according to

claim 5, wherein the coupler case comprises a coupler case bottom plate and two coupler case side plates, the coupler case bottom plate is connected with a lower wing plate of the coupler seat plate, the two coupler case side plates are connected with the web plate of the coupler seat plate,

the coupler case bottom plate, the coupler seat plate, the front end plate and the two coupler case side plates cooperate with the vehicle body underframe floor to form an accommodating chamber that is in communication with the outside only through the through hole.

10. The vehicle body end underframe structure of the multiple-unit train according to claim 9, wherein the front end plate comprises a main body and two T-shaped connectors, the through hole is arranged in the main body, the two T-shaped connectors are respectively arranged on two sides of the main body, a transverse plate of each T-shaped connector is connected with the main body, and a vertical plate of each T-shaped connector is connected with the corresponding coupler case side plate.

11. The vehicle body end underframe structure of the multiple-unit train according to claim 10, wherein the front end plate further comprises a transverse installing plate, the transverse installing plate is connected with a lower end of the main body and the two T-shaped connectors, and a C-shaped sliding groove for installing a vehicle body underframe end bottom plate is provided on an inner side of the transverse installing plate.

12. The vehicle body end underframe structure of the multiple-unit train according to any one of claims 2 to 3 and 6 to 11, wherein the traction beam assembly comprises a plurality of traction beams, and the plurality of traction beams are connected to the rear side of the coupler seat plate side by side and are spaced apart from each other.

13. The vehicle body end underframe structure of the multiple-unit train according to claim 12, wherein the hoisting interface is at least arranged on the traction beam side plates, away from each other, of two traction beams on two sides of the traction beam assembly.

~~14. The vehicle body end underframe structure of the multiple-unit train according to any one of claims 1 to 3, 6 to 11, and 13, wherein an installation surface, for cooperating with the external attached equipment, of the hoisting interface is arranged downward, a sliding groove corresponding to the installation surface is provided in the hoisting interface, the sliding groove is configured to place a sliding block, and a hoisting bolt extends into the sliding groove to cooperate with the sliding block to hoist the external attached equipment at the hoisting interface.~~

~~15~~14. The vehicle body end underframe structure of the multiple-unit train according to any one of claims 1 to 3, 6 to 11, and 13, wherein an outer surface of the front end plate and an outer surface of an end wall of the vehicle body underframe are a same end surface.

~~16~~15. The vehicle body end underframe structure of the multiple-unit train according to any one of claims 1 to 3, 6 to 11, and 13, wherein the front end plate is provided with an electrical connector installation structure on two sides of the through hole, the electrical connector installation structure comprises a case-shaped box which is in parallel with the through hole, and an upper top wall of the case-shaped box is provided with a wiring hole and an installing hole provided around the wiring hole.

~~17~~16. The vehicle body end underframe structure of the multiple-unit train according to claim ~~16~~15, wherein the upper top wall of the case-shaped box tilts downward from an end of the case-shaped box on an outer surface of the front end plate to form an inclination angle.

~~18~~17. The vehicle body end underframe structure of the multiple-unit train according to any one of claims 1 to 3, 6 to 11, and 13, wherein a stepped boss structure for cooperating with a vehicle body end side skirt plate to press a sealing rubber strip is provided on each of two ends of an inner side surface of the front end plate.

~~19~~18. A multiple-unit train, comprising the vehicle body end underframe structure of the multiple-unit train according to any one of claims 1 to ~~18~~17.