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(54) **MULTI-MOVER DIRECT DRIVE TRANSMISSION SYSTEM**

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ABSTRACT

The multi-mover direct drive transmission system includes multiple stator units, a guide rail, multiple mover units, and a controller. Each of the multiple stator units includes a stator, a winding, a photoelectric switch, a reading head, and a driver. Each of the multiple mover units includes a mover, and a magnetic steel, two stoppers, and a grating ruler. Each of the two stoppers are configured to pass and block the photoelectric switch. The grating ruler is arranged opposite to the reading head, and the reading head is configured to read information from the grating ruler in real-time. The controller is configured to obtain the reading signal and two zero signals from the photoelectric switch by the driver. Compared with the conventional art, the multi-mover direct drive transmission system of the present invention has simple structure, high positioning accuracy, and easy to use.

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