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(54) MULTI-MOVER DIRECT DRIVE TRANSMISSION SYSTEM, RELATED CONTROL METHOD, COMPUTER DEVICE, AND STORAGE MEDIUM

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(57)ABSTRACT

A multi-mover direct drive transmission system, including: stator unit formed by stator segments and includes frame and coil windings; mover units movable relative to the stator unit and each includes mover slidably connected to the stator unit and movable relative to the frame, and magnet fixed to the mover; and actuators. The magnet is arranged opposite to and spaced from the coil winding, and the coil winding drives the magnet to drive the mover. The frame includes feedback segments and transition segments. The stator unit further includes hall elements. The hall element outputs a hall signal according to a magnetic field variation detected. The actuator calculates an electrical angle and calculates a drive current, the coil winding drives the magnet to move to realize position correction. The multi-mover direct drive transmission system has a simple structure, a small number of components, and is simple and easy-to-implement the motion control method.



