

ABSTRACT

VERTICAL TAKE-OFF AND LANDING AIRCRAFT AND CONTROL METHOD THEREOF

The present application provides a vertical take-off and landing aircraft and a control method thereof. The vertical take-off and landing aircraft includes: a fuselage and $2N$ tilting rotors. Both sides of the fuselage are provided with a wing symmetrically, a tail of the fuselage is provided with an empennage, and ruddervators are provided at the empennage. $2N$ tilting rotors are symmetrically provided at both sides of the fuselage, and a part of the $2N$ tilting rotors are provided on the empennage. N is a natural number greater than or equal to 2; in a vertical take-off and landing state, projections of propellers of the $2N$ tilting rotors on a horizontal plane are centrally symmetrical about point B, point B and a center of gravity point G of the vertical take-off and landing aircraft are both provided in a symmetry plane of the fuselage, and point B is provided at a side of point G close to the empennage. During the transition of a vertical take-off and landing aircraft from a vertical take-off and landing state to a cruising state, both point G and point B is configured to move along the symmetry plane, and point B is always provided at the side of point G close to the empennage. This configuration enables the vertical take-off and landing aircraft to have relatively good pitch trimming capability.

[Fig. 1]