

Abstract

The invention relates to a method for operating a slewing jib crane (2) by means of state control, wherein the state control effects a control of a motion of a suspended load (L) at least in one direction of motion and is based on a state vector, comprising the following steps:

- detecting state variables of the state vector, which contain information on a position (x, θ) and a velocity (x', θ') of a movable suspension point (AUP) to which a load system comprising a hoist rope (HSL), a load-carrying device (UF) arranged at a lower end of the hoist rope (HSL) and a load (L) suspended below the load-carrying device (UF) is suspended, and information on a load position (φ_x, φ_y) and a load velocity (φ'_x, φ'_y) of a center of mass of the load system with respect to the suspension point (AUP),
- determining at least one actuating variable $(u^*_{LK}, u^*_{DW}, u^*_{HW})$ for moving the suspension point (AUP) in the at least one direction of motion based on the state control;
- operating the slewing jib crane (2) as a function of the at least one actuating variable $(u^*_{LK}, u^*_{DW}, u^*_{HW})$.

Fig. 1