Title (en)

CRANE AND METHOD FOR CONTROLLING SUCH A CRANE

Title (de)

KRAN UND VERFAHREN ZUM STEUERN EINES SOLCHEN KRANS

Title (fr)

GRUE ET PROCÉDÉ DE COMMANDE D'UNE TELLE GRUE

Publication

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Application

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Abstract (en)

[origin: WO2019007541A1] The invention relates to a crane, in particular a rotary tower crane, comprising a lifting cable (207) which runs out from a crane boom (202) and has a load receiving means (208), drive devices for moving multiple crane elements and displacing the load receiving means (208), a controller (3) for controlling the drive devices such that the load receiving means (208) is displaced along a movement path, and a pendulum damping device (340) for damping pendulum movements of the load receiving means (208) and/or of the lifting cable (207). The pendulum damping device (340) has a pendulum sensor system (60) for detecting pendulum movements of the lifting cable (207) and/or of the load receiving means (208) and a regulator module (341) comprising a closed control loop for influencing the actuation of the drive devices depending on a pendulum sensor system (60) signal returned to the control loop. The invention is characterized in that the pendulum damping device (340) has a structural dynamic sensor system (342) for detecting deformations and/or dynamic inherent movements of structural components of the crane, and the regulator module (341) of the pendulum damping device (340) is designed to take into consideration both the pendulum signal of the pendulum sensor system (60) as well as the structural dynamic signals which are returned to the control loop and specify deformations and/or dynamic inherent movements of the structural components, while influencing the actuation of the drive devices. The invention also relates to a corresponding method for controlling a crane, in particular a rotary tower crane, the load receiving means (208) of which, said means being attached to a lifting cable (207), are displaced by drive devices that are actuated by a controller (3) of the crane, wherein the actuation of the drive devices is influenced by a pendulum damping device (340) comprising a regulator module (341) with a closed control loop depending on pendulum-relevant parameters.

IPC 8 full level

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