

Title (en)  
METHOD AND CONTROL DEVICE FOR THE VIBRATION-REDUCED DISPLACEMENT OF A DISPLACABLE CRANE ELEMENT OF A CRANE SYSTEM.

Title (de)  
VERFAHREN UND STEUERUNGSEINRICHTUNG ZUR SCHWINGUNGSARMEN BEWEGUNG EINES BEWEGBAREN KRANELEMENTES EINES KRANSYSTEMS

Title (fr)  
MÉTHODE ET DISPOSITIF DE COMMANDE POUR LE DÉPLACEMENT, AVEC PEU DE VIBRATIONS, D'UN ÉLÉMENT DE GRUE D'UN ENSEMBLE DE GRUE.

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Abstract (en)  
[origin: WO2012119985A1] The invention relates to a method and a control device for the low-vibrational control of the movement, by means of a motor (20), of a moveable crane element (14, 16, 18) such as a crane jib (18) in a crane system (10), said crane element being made to vibrate at a natural frequency (fEIG) and having a damping ratio (?). Said moveable crane element (14, 16, 18) is controlled by a control signal (VSOLL), the spectrum of which is substantially free from natural frequencies (fEIG) of the crane system (10), and the control signal (VSOLL) is calculated from an operator signal (SBED) of an operator, taking into account system parameters of the crane system (10). So as to reduce vibrations in a rotating tower crane structure during the pivoting movement and to simplify configuration of the control device in a method and control device of the type referred to initially, the system parameters in the form of the natural frequency (fEIG) and the damping ratio (?) of the crane system (10) are automatically calculated during operation, and the control signal (VSOLL) is calculated in real-time, as an active speed-reference profile (VSOLL), from the operator signal (SBED) of the operator as well as from the calculated natural frequency (fEIG) and the damping ratio (?) of the crane system (10).

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