



ABSTRACT

A control system which stabilizes the hoisting rope of a suspension crane comprising a travel drive control unit capable of calculating a torque reference signal by a speed regulating controller having a proportional gain and an integrator or only a proportional gain on the basis of the deviation of a speed detection signal representing the rotating speed of a traveling motor for driving the trolley of the crane from a speed reference signal obtained by subtracting a damping control speed reference correction signal which is obtained by adding a damping factor to a swing angle calculated on the basis of the speed detection signal representing the rotating speed of the traveling motor or a calculated load torque on the traveling motor from a speed reference signal provided through a linear acceleration starter device by a speed reference device, of controlling the rotating speed of the traveling motor according to the torque reference signal, and of producing a damping effect for damping the oscillation of the hoisting rope through the output drive shaft of the traveling motor; a hoist motor for hoisting the hoist load; and a hoist motor drive control

This Sheet Has Been Replaced



unit. The control system suppresses the oscillation of the hoisting rope resulting from the acceleration and deceleration of the trolley, enabling the trolley to travel at a relatively high speed and further enabling the automatic operation of the crane.