

ABSTRACT

SUSPENDED LOAD SWING DISPLACEMENT DETECTOR

A swing displacement detector comprises a swing displacement detector 15 for detecting relative displacement x_1 between a trolley 4 and a suspended load 6 in a crane suspending the suspended load 6 by a rope 5 or the like; a crane upper structure displacement detector 16 for detecting the displacement of a crane upper structure 1 supporting the trolley 4 from the ground surface; and an arithmetic means 17 for receiving as inputs the measured value x_1 of suspended load displacement by the swing displacement detector 15, and the measured value x_2 of crane upper structure displacement by the crane upper structure displacement detector 16, and for correcting the measured value x_1 of suspended load displacement based on the difference between the measured value x_1 of suspended load displacement and the measured value x_2 of crane upper structure displacement. Thus, the vibrational component of the crane upper structure can be eliminated from the measured value of swing of the suspended load, whereby the swing component of the suspended load can be detected highly accurately.

FIGURE 1