

Title (en)

METHOD AND DEVICE FOR DETERMINING AN OPERATING POINT OF A WORK MACHINE

Title (de)

VERFAHREN UND VORRICHTUNG ZUR BETRIEBSPUNKTBESTIMMUNG EINER ARBEITSMASCHINE

Title (fr)

PROCEDE ET DISPOSITIF DE DETERMINATION D'UN POINT DE FONCTIONNEMENT D'UNE MACHINE DE TRAVAIL

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2010133425A1] The present invention relates to a method and a device for determining an operating point of a work machine and/or of an asynchronous motor driving the same, wherein an operating point is characterized by a power consumed by the work machine and/or by the output rate thereof, one or more operating point-dependent measurement variables of the work machine are detected by one or more sensors, and the measured values are evaluated and/or stored during operation of the work machine. The operating point is determined without the use of electric measurement variables of the driving asynchronous motor in that a frequency that is linearly proportional to the fundamental tone of the work machine is determined by means of a signal analysis, in particular a frequency analysis, from one of the mechanical measurement variables of pressure, differential pressure, power, vibration, solid-borne or airborne sound. On the basis of this, the rotational speed (n) of the driving machine is determined, from which in turn the operating point characterized by the power (P2) consumed by the work machine and/or by the output rate (Q) thereof is determined using the rotational speed/torque dependency (M(n)) of the asynchronous motor (52).

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CPC (source: EP US)

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Citation (search report)

See references of WO 2010133425A1

Cited by

WO2019096545A1; US11487262B2; DE102017214203A1; WO2019034426A2; DE102020005050A1; WO2022038026A1; US11475129B2

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