

Title (en)

METHOD FOR DETECTING AN ABNORMAL OPERATING STATE OF A PUMP UNIT

Title (de)

VERFAHREN ZUR DETEKTION EINES ABNORMALEN BETRIEBSZUSTANDS EINES PUMPENAGGREGATS

Title (fr)

PROCÉDÉ DE DÉTECTION D'UN ÉTAT DE FONCTIONNEMENT ANORMAL D'UN GROUPE DE POMPAGE

Publication

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Application

**EP 18719751 A 20180327**

Priority

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Abstract (en)

[origin: WO2018197033A1] The invention relates to a method for detecting an abnormal operating state of a rotational-speed-controllable pump unit (1) operated at a specifiable rotational speed ( $n_0$ ). A periodic excitation signal ( $f_A(t)$ ) of a certain frequency ( $f$ ) is applied to a manipulated variable ( $nsoll$ ) of the pump unit (1) in such a way that a hydraulic variable ( $H, \Delta p$ ) of the pump unit (1) is modulated. From a mechanical and/or electrical variable ( $P_{el}$ ) of the pump unit (1) as a system response ( $X(t)$ ) to the excitation signal ( $f_A(t)$ ), an evaluation signal ( $I(t_0), I(t)$ ) is then calculated and it is determined therefrom whether an abnormal operating state exists. The invention further relates to pump electronics for the open-loop and/or closed-loop control of the target rotational speed of a pump unit (1), which pump electronics are designed to carry out the method, and to a pump unit having such pump electronics.

IPC 8 full level

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