Title (en)

METHOD AND DEVICE TO DETECT AN INDICATOR FOR THE PREDICTION OF AN INSTABILITY IN A COMPRESSOR, AND CORRESPONDING USE

Title (de)

VERFAHREN UND VORRICHTUNG ZUM BESTIMMEN EINES INDIKATORS FÜR EINE VORHERSAGE EINER INSTABILITÄT IN EINEM VERDICHTER SOWIE VERWENDUNG

Title (fr)

PROCÉDÉ ET DISPOSITIF POUR DÉTECTER UN INDICATEUR POUR LA PRÉDICTION D'UNE INSTABILITÉ DANS UN COMPRESSEUR, ET USAGE CORRESPONDANT

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Application

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Abstract (en)

[origin: WO2018157889A1] The invention relates to a method for determining an indicator for a prediction of an instability in a compressor, which is designed as an axial or radial compressor, having the following steps: operating a compressor designed as an axial or radial compressor in operating states, which differ by different values of a characteristic parameter for a flow mass flux of the compressor, wherein the operating states are run through at decreasing flow mass fluxes; determining the values of the characteristic value for the flow mass flux for the operating states; detecting time-resolved pressure measurement values when running through the operating states by means of a pressure sensor (6), which is arranged in a housing of the compressor, upstream adjacent to an entrance plane of a rotor stage (2); determining the skew for the operating states and determining an indicator for an instability of the compressor, if an algebraic sign change of the curve rise is determined for a curve profile of the skew over the characteristic parameter for the flow mass flux for the operating states. The invention further relates to the use of the method and a device for determining an indicator for a prediction of an instability in an compressor.

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