

Title (en)

COMPRESSOR STALL DIAGNOSTICS AND AVOIDANCE

Title (de)

DIAGNOSE UND VERMEIDUNG DES PUMPENS EINES VERDICHTERS

Title (fr)

DIAGNOSTIC ET EVITEMENT DU CALAGE DE COMPRESSEURS

Publication

EP 0777828 A1 19970611 (EN)

Application

EP 96920104 A 19960417

Priority

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- US 42733495 A 19950424
- US 1318796 P 19960312

Abstract (en)

[origin: WO9634207A1] A pressure sensor (12) is located in the compressor stage of a gas turbine engine (10) to provide a pressure signal (PR1) that shows the compressor flow characteristics. The pressure signal (PR1) is applied to a bandpass filter (16) with roll-offs above and below N2. The difference between the filter output and a stored value for the pressure signal is integrated, and compressor bleed valves (18) are opened if the integral exceeds a stored threshold. The health of a compressor stage is determined by analyzing the magnitude of compressor pressure variations at N2 while accelerating the engine and by comparing the magnitude with values obtained from a compressor with a known stall margin.

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