

Title (en)
GAS TURBINE ENGINE WITH ACTIVE PROTECTION FROM FLAME EXTINCTION AND METHOD OF OPERATING A GAS TURBINE ENGINE

Title (de)
GASTURBINENMOTOR MIT AKTIVEM SCHUTZ VOR FLAMMENAUSLÖSCHUNG UND VERFAHREN ZUM BETREIBEN EINES
GASTURBINENMOTORS

Title (fr)
MOTEUR À TURBINE À GAZ COMPORTANT UNE PROTECTION ACTIVE CONTRE L'EXTINCTION DE FLAMME ET PROCÉDÉ DE
FONCTIONNEMENT D'UN MOTEUR À TURBINE À GAZ

Publication
EP 3757460 A1 20201230 (EN)

Application
EP 19183461 A 20190628

Priority
EP 19183461 A 20190628

Abstract (en)
A gas turbine engine includes an annular first combustor assembly (5) and a second combustor assembly (8). At least three flame detectors (18) are arranged to monitor flame presence in the first combustor assembly (5) and supply respective flame monitoring signals (SFM1, SFM2, SFM3) indicating flame presence. A temperature monitoring assembly (20), detects a control temperature (TC) of hot gas flowing from the first combustor assembly (5) to the second combustor assembly (8) downstream of the first combustor assembly (5). A processing unit (17) determines dangerous flame failure based, at least in a control range of operating conditions, on the flame monitoring signals (SFM1, SFM2, SFM3) and a control function of the control temperature (TC) and based on M-out-of-N activation redundancy with Hardware Failure Tolerance of at least 1, wherein M is at least 3 and N is at least 4.

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
• [A] EP 0677706 A1 19951018 - GEN ELECTRIC [US]
• [A] EP 2930330 A1 20151014 - ROLLS ROYCE PLC [GB]
• [A] EP 1840464 A1 20071003 - ALSTOM TECHNOLOGY LTD [CH]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

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