

Title (en)
CAVITATION DETECTION USING TORQUE LOAD AND/OR INSTANTANEOUS FUEL CONSUMPTION

Title (de)
KAVITATIONSDETEKTION UNTER VERWENDUNG VON DREHMOMENTBELASTUNG UND/ODER SOFORTIGEM KRAFTSTOFFVERBRAUCH

Title (fr)
DÉTECTION DE CAVITATION À L'AIDE D'UNE CHARGE DE COUPLE ET/OU D'UNE CONSOMMATION DE CARBURANT INSTANTANÉE

Publication
EP 4372221 A1 20240522 (EN)

Application
EP 23209440 A 20231113

Priority

- US 202263426559 P 20221118
- US 202363546128 P 20231027
- US 202318387285 A 20231106

Abstract (en)
Exemplary embodiments are disclosed of controllers (e.g., control panels, etc.) configured to be operable for detecting cavitation using torque load and/or instantaneous fuel consumption. In exemplary embodiments, a controller is configured to be operable for monitoring at least one of engine torque load and/or engine instantaneous fuel consumption for fluctuation (e.g., significant drop/downward fluctuation in average magnitude and/or erratic, noisy, fluctuating data, etc.) indicative of pump cavitation, thereby enabling the controller to be operable for alerting to indications of pump cavitation when fluctuation of the monitored engine torque load and/or engine instantaneous fuel consumption indicate pump cavitation.

IPC 8 full level
F02D 41/00 (2006.01); **F02D 41/22** (2006.01); **F04B 51/00** (2006.01); **F04D 29/66** (2006.01)

CPC (source: EP)
F02D 41/0097 (2013.01); **F02D 41/22** (2013.01); **F04B 49/065** (2013.01); **F04B 49/10** (2013.01); **F04D 13/02** (2013.01); **F04D 15/0088** (2013.01); **F04D 29/669** (2013.01); **F02D 2200/0625** (2013.01); **F02D 2200/1002** (2013.01); **F05D 2270/335** (2013.01)

Citation (applicant)
US 18220686 B1

Citation (search report)

- [X] US 6709240 B1 20040323 - SCHMALZ STEVEN C [US], et al
- [X] EP 2196678 B1 20120711 - ABB OY [FI]
- [X] EP 2500579 A1 20120919 - SIEMENS AG [DE]
- [X] US 7489997 B2 20090210 - IIHOSHI YOICHI [JP], et al
- [X] US 2018038216 A1 20180208 - ZHANG YANCHAI [US], et al
- [E] WO 2024015377 A1 20240118 - CATTRON NORTH AMERICA INC [US]
- [E] EP 4299908 A1 20240103 - HAMILTON SUNDSTRAND CORP [US]

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4372221 A1 20240522; CA 3219433 A1 20240518

DOCDB simple family (application)
EP 23209440 A 20231113; CA 3219433 A 20231109