

Title (en)
FLUID RECIRCULATION SYSTEM

Title (de)
FLÜSSIGKEITSRÜCKFÜHRUNGSSYSTEM

Title (fr)
SYSTÈME DE RECIRCULATION DE FLUIDE

Publication
EP 3653941 A1 20200520 (EN)

Application
EP 18382805 A 20181115

Priority
EP 18382805 A 20181115

Abstract (en)
Fluid recirculation system comprising one or more by-pass lines, which communicate the outlet of a pipe at the points of consumption with another point of the installation, a pumping module configured to be installed on one of the branches, which comprises a processing circuit, a power source and a recirculation pump, an activation module configured to be installed at a point of consumption, which comprises a valve that regulates the passage of the fluid through said by-pass ducts and a means of drive configured to mechanically actuate the valve, and finally at least one communication cable that links one of the drive means to the processing circuit, the cable being configured to send signals through the corresponding pipes between the drive means and the processing circuit, and the latter being configured to contact each cable.

IPC 8 full level
F24D 17/00 (2006.01); **E03B 7/04** (2006.01); **F24D 19/10** (2006.01)

CPC (source: EP US)
E03B 7/045 (2013.01 - EP); **F24D 17/0078** (2013.01 - EP); **F24D 19/1051** (2013.01 - EP US); **F24D 2220/0207** (2013.01 - EP); **F24D 2220/0271** (2013.01 - EP)

Citation (applicant)
• EP 2554919 A1 20130206 - CUERVO-ARANGO Y DE CACHAVERA ALFONSO [ES]
• ES 1060933 U 20051201 - CUERVO-ARANGO Y DE CACHAVERA A [ES]
• ES 2409082 A1 20130624 - LARDIES SOBREVIELA FRANCISCO JAVIER [ES]

Citation (search report)
• [I] WO 2015181411 A1 20151203 - MÉTRICA6 INGENIERÍA Y DESARROLLOS S L [ES]
• [I] WO 2013017938 A1 20130207 - CORREIA ALVES PAULO ANDRE [PT], et al
• [I] ES 2482941 A1 20140805 - UNIV MADRID POLITECNICA [ES]

Cited by
US2023116017A1; US12092344B2

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

DOCDB simple family (publication)
EP 3653941 A1 20200520; **EP 3653941 B1 20210908**; ES 1233109 U 20190731; ES 1233109 Y 20191021; ES 2902043 T3 20220324; PL 3653941 T3 20220117; PT 3653941 T 20211210

DOCDB simple family (application)
EP 18382805 A 20181115; ES 18382805 T 20181115; ES 201931079 U 20190626; PL 18382805 T 20181115; PT 18382805 T 20181115