

Title (en)
PUMP CONTROL BASED ON BUBBLE DETECTION

Title (de)
PUMPENSTEUERUNG BASIEREND AUF BLASENDETEKTION

Title (fr)
COMMANDE DE POMPE BASÉE SUR LA DÉTECTION DE BULLES

Publication
EP 4036407 A1 20220803 (EN)

Application
EP 22154617 A 20220201

Priority

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Abstract (en)

A pump system (110) includes a drive motor (240), a pump head (222) that receives tubing, and a controller (260) configured to control a rotation of the drive motor (240) to move a liquid within the tubing from an inlet to an outlet. A bubble sensor (112) is coupled to the tubing downstream from the outlet and configured to send a signal to the controller (160) in response to presence of a gas bubble within the tubing. The controller (160) is configured to: determine a quantity of bubbles detected based on the signal; determine an alert in response to the quantity of bubbles detected exceeding a threshold; and stop the drive motor after a safe operating time from the alert. The threshold and the safe operating time are based, at least in part, on a characteristic of the tubing. The corresponding method of operating a pump system (110) is also disclosed.

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Citation (applicant)
US 9546983 B2 20170117 - FRITSCHKE TOBIAS [DE], et al

Citation (search report)

- [A] US 5116203 A 19920526 - NATWICK VERNON R [US], et al
- [A] US 2011318198 A1 20111229 - JOHNSON THOMAS D [US], et al
- [A] EP 2716312 A1 20140409 - NIPRO CORP [JP]
- [AD] US 9546983 B2 20170117 - FRITSCHKE TOBIAS [DE], et al

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