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DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
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(54) Title: A MOBILE SYSTEM FOR CONTINUOUS, AUTOMATIC, ONLINE MONITORING OF WATER QUALITY AND
PARTICLE SAMPLING IN A DRINKING WATER DISTRIBUTION NETWORK

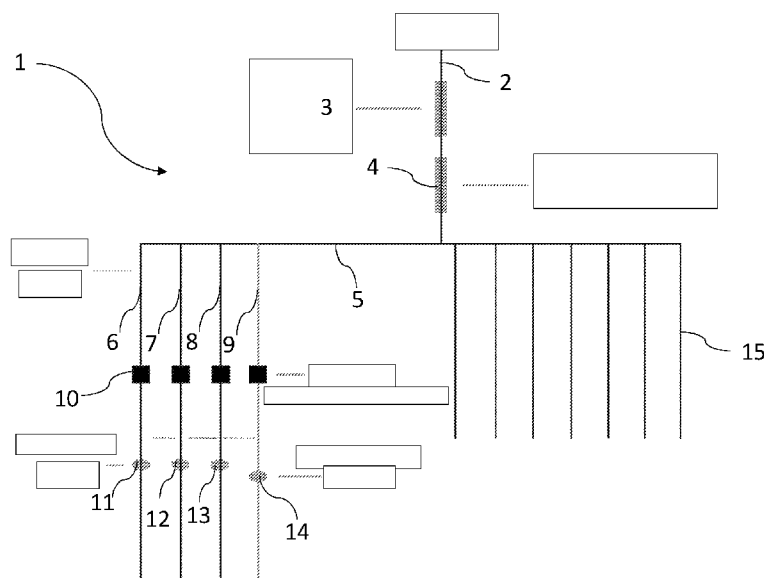


Fig. 1

(57) Abstract: The present invention relates to a mobile system (1) for continuous, automatic, online monitoring of water quality and particle sampling in a drinking water distribution network, comprising: a mobile unit provided with means for supplying, from at least a selected one of the plurality of points in the drinking water distribution network, a corresponding, selected influent fluid sample stream (2); means for discharging a corresponding, selected effluent fluid sample stream; for each selected influent fluid sample stream (2), a respectively associated continuous monitor module comprising means (3) for monitoring the temperature, the flow rate and the pressure of the influent sample stream (2) as well as means (10) for guiding said fluid sample stream (2) to a bottle (14) for collecting a water sample and to filters (11, 12, 13) for collecting particles.

GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2019/050405

A. CLASSIFICATION OF SUBJECT MATTER

INV. G01N33/18 G01N15/06 C02F1/00 G01N1/20
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G01N C02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 2012 0034924 A (KOREA WATER RESOURCES CORP [KR]) 13 April 2012 (2012-04-13) cited in the application	1,2,5, 7-9
Y	paragraphs [0021] - [0026]; figures 1, 2	3,4,6, 10,11
Y	----- DE 10 2009 048790 A1 (EADS DEUTSCHLAND GMBH [DE]) 21 April 2011 (2011-04-21) abstract; figure 1	3
Y	----- US 2014/154138 A1 (LUNDGREEN ULRICH [DE] ET AL) 5 June 2014 (2014-06-05) paragraph [0067]	4
Y	----- US 2016/340204 A1 (CHOWDHURY SUDHIR [SE] ET AL) 24 November 2016 (2016-11-24) cited in the application paragraphs [0105] - [0117]; figure 1 ----- -/-	6,12-16

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2017/153217 A1 (JOHNSTON SIMON [GB]) 1 June 2017 (2017-06-01) abstract; figures 1a, 1b -----	10,11
Y	LIU G ET AL: "Quantification and identification of particle-associated bacteria in unchlorinated drinking water from three treatment plants by cultivation-independent methods", WATER RESEARCH, vol. 47, no. 10, 10 April 2013 (2013-04-10), pages 3523-3533, XP028538314, ISSN: 0043-1354, DOI: 10.1016/J.WATRES.2013.03.058 paragraph [2.2.]; figure 1 -----	12-16

INTERNATIONAL SEARCH REPORT

International application No.
PCT/NL2019/050405

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-11

Mobile unit with monitoring means for temperature, flow rate and pressure

2. claims: 12-16

Plurality of branch lines with automatically controllable valves

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/NL2019/050405

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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