



- (51) **International Patent Classification:**
G01F 1/66 (2006.01) *G01F 1/74* (2006.01)
- (21) **International Application Number:**
PCT/NL2011/050864
- (22) **International Filing Date:**
20 December 2011 (20.12.2011)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2005886 21 December 2010 (21.12.2010) NL
61/425,704 21 December 2010 (21.12.2010) US
- (71) **Applicant (for all designated States except US):** NEST INTERNATIONAL N.V. [NL/NL]; Landhuis Joonchi, Kaya Richard J., Beaujon ZN, Willemstad, Curaçao (CW).
- (72) **Inventors; and**
- (71) **Applicants :** DROBKOV, Vladimir [RU/RU]; Osennya Street, 4/1, Flat 12, Moscow, 1212609 (RU). MELNIKOV, Vladimir [RU/RU]; Kuibysheva Street, 17 Flat 25, N. Novgorod, 603074 (RU). SHUSTOV, Andrey [RU/NL]; 2215, de Gildekamp, NL-6545 KH Nijmegen (NL).
- (74) **Agent:** DE WEERDT, R.E.M.L.; Postbus 3241, NL-2280 GE Rijswijk (NL).

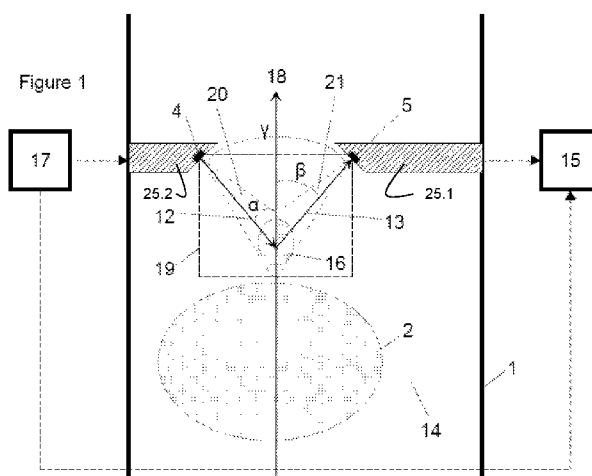
(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) **Title:** DEVICE AND METHOD FOR DETERMINING A FLOW VELOCITY OF A FLUID OR A FLUID COMPONENT IN A PIPELINE



(57) **Abstract:** A device and a method for determining a flow velocity of a fluid or a fluid component in a pipeline is described. The device comprises a transmitter adapted to be placed inside the pipeline and arranged to transmit an ultrasound signal into the fluid or fluid component in a first direction; a receiver adapted to be placed inside the pipeline and arranged to receive a dispersed ultrasound signal, generated by dispersion of the ultrasound signal by the fluid or the fluid component in a second direction, the second direction being different from the first direction, and to provide a receiver signal representing the dispersed ultrasound signal; and, a processing unit arranged to receive said receiver signal and to determine a frequency difference between the transmitted ultrasound signal and the dispersed ultrasound signal and determining the flow velocity of the fluid or the fluid component based on said difference.