

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 January 2009 (22.01.2009)

PCT

(10) International Publication Number
WO 2009/011543 A1

(51) International Patent Classification:

F16L 55/18 (2006.01)

(21) International Application Number:

PCT/KR2008/004169

(22) International Filing Date: 16 July 2008 (16.07.2008)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:

10-2007-0070952 16 July 2007 (16.07.2007) KR

10-2008-0069052 16 July 2008 (16.07.2008) KR

(71) Applicant (for all designated States except US): **GYE MYEONG CO., LTD.** [KR/KR]; 548-3 Pungse-ri, Pungse-myeon, Cheonan-si, Chungcheongnam-do 330-913 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SONG, Myung Sub** [KR/KR]; San 47-1 Jungjang-ri, Gyeryong-myeon, Gongju-si, Chungcheongnam-do 314-835 (KR). **SONG,**

Ki Ho [KR/KR]; 303, Cheong Bong Bldg., 40-1 Oryong-dong, Cheonan-si, Chungcheongnam-do 330-030 (KR).

(74) Agent: **KIM, Tae Wook**; 2F, Ilkwang Bldg., 1656-2 Seocho-1dong, Seocho-gu, Seoul 137-881 (KR).

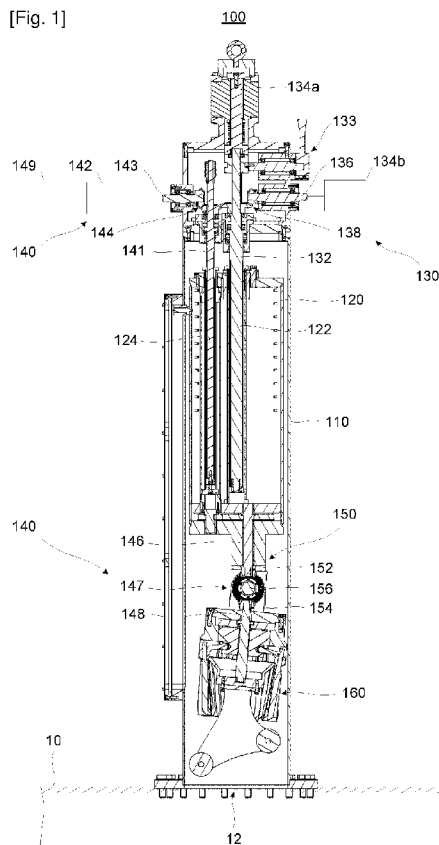
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(54) Title: APPARATUS FOR BLOCKING FLUID FLOW IN A PIPE LINE AND SYSTEM FOR FORMING BYPASS USING THE SAME

[Fig. 1]



(57) Abstract: In a pipeline fluid flow blocking device, a hollow housing unit has a cylindrical shape whose one side is opened and is coupled to a pipeline to communicate with the pipeline. A transfer unit moves in a longitudinal direction of the housing unit inside the housing unit. A first driving unit moves the transfer unit in a gear method. A blocking unit is hinge-coupled to one side of the transfer unit, is disposed to move between the housing unit and the inside of the pipeline through the opened one side of the housing unit by the transfer unit, and is radially expanded or shrunk to shut off the inside of the pipeline. A second driving unit makes the blocking unit be expanded or shrunk. Therefore, as the blocking unit is expanded in a gear method, resistance force against a fluid of very high pressure inside the pipeline is greatly improved, thereby more stably shutting the inside the pipeline.



FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,
NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments*

Published:

— *with international search report*