

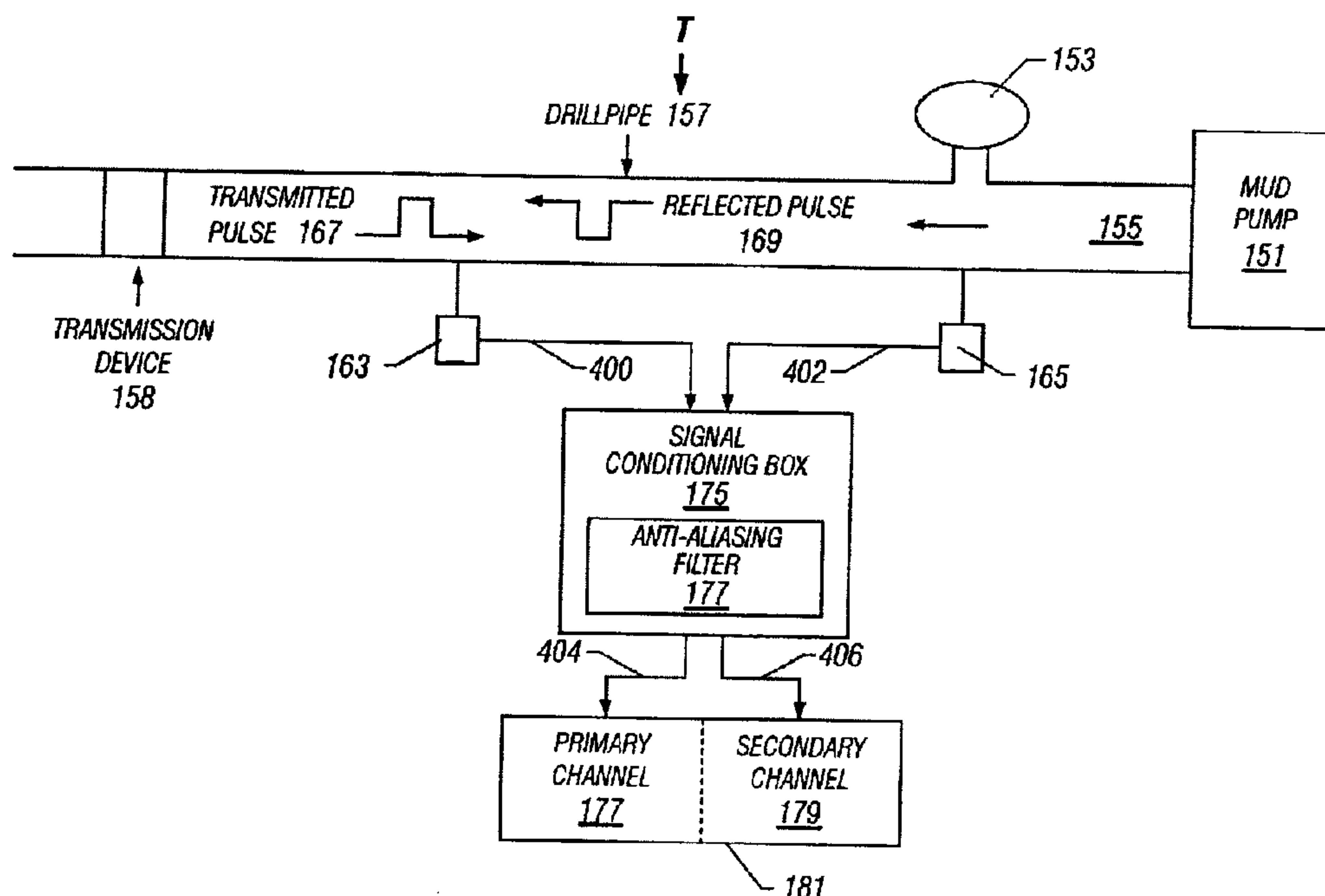


(86) Date de dépôt PCT/PCT Filing Date: 2000/12/08
(87) Date publication PCT/PCT Publication Date: 2001/06/28
(45) Date de délivrance/Issue Date: 2007/03/13
(85) Entrée phase nationale/National Entry: 2002/06/21
(86) N° demande PCT/PCT Application No.: US 2000/042725
(87) N° publication PCT/PCT Publication No.: 2001/046548
(30) Priorité/Priority: 1999/12/22 (US09/469,989)

(51) Cl.Int./Int.Cl. *G01V 1/40* (2006.01),
B21B 47/00 (2006.01), *E21B 47/18* (2006.01)
(72) Inventeurs/Inventors:
ABDALLAH, ALI H., US;
BEATTIE, MARK S., US
(73) Propriétaire/Owner:
W-H ENERGY SERVICES, INC., US
(74) Agent: BORDEN LADNER GERVAIS LLP

(54) Titre : TECHNIQUE DE DETECTION DE SIGNAL AU MOYEN DE FILTRATION ADAPTEE DANS UNE UNITE DE
TELEMESURE PAR IMPULSIONS DANS LA BOUE

(54) Title: TECHNIQUE FOR SIGNAL DETECTION USING ADAPTIVE FILTERING IN MUD PULSE TELEMETRY



(57) Abrégé/Abstract:

a mud pulse telemetry adaptive noise canceller (ANC) is provided to provide information on down hole conditions during a Measurement-While-Drilling/Logging-While-Drilling (MWD/LWD) operation. The ANC (181) employs a Signal Conditioning Box (175), Anti-Aliasing Filter (177) and two transducers, each receiving a succession of signals due to a transmission device (158). A primary transducer (163), located downhole from both a mud pump (151) and a desurger, receives a primary signal. A reference transducer (165), located near the mud pump (151) and upstream from the desurger (153), receives a reference signal. The ANC linearly relates the reference signal to the primary signal by means of a recursive least squares algorithm and calculates weighting coefficients. The ANC (181) uses weighing coefficients to process a subsequent primary signal, thus enhancing transmission of MWD and/or LWD data thru a downhole drillpipe (157) via the medium of Mud Flow (155).



