

Title (en)

TIME GATE ULTRASONIC SENSOR AND METHOD.

Publication

EP 0596966 A4 19940921 (EN)

Application

EP 92916332 A 19920716

Priority

- US 9205892 W 19920716
- US 73718091 A 19910729

Abstract (en)

[origin: WO9303340A1] A time gate ultrasonic sensor (10) measures a physical property of a material, such as the presence of the material, within a defined space (20). The sensor (10) includes at least one transducer (14, 16) connected to a support structure (12) and positioned generally adjacent the defined space (20) for transmitting and receiving ultrasonic signals (22) across the defined space (20). The ultrasonic signals (22) include a main waveform (48, 62) which travels across the defined space (20) and a self-test waveform (50, 60) which travels along the support structure (18, 43). The sensor (10) monitors the received ultrasonic signals (22) during a main time window (120) to sense whether the main waveform (48, 62) is present in the received signals (22). The sensor (10) senses the physical property of the material within the defined space (20) as a function of whether the main waveform (48, 62) is present within the time window (120).

IPC 1-7

G01F 23/28

IPC 8 full level

G01F 23/28 (2006.01); **G01F 23/296** (2006.01); **G01F 25/00** (2006.01); **G01N 29/00** (2006.01); **G01N 29/024** (2006.01); **G01V 1/00** (2006.01)

CPC (source: EP)

G01F 23/2961 (2013.01); **G01F 23/2962** (2013.01); **G01F 25/0092** (2013.01); **G01N 29/024** (2013.01); **G01V 1/001** (2013.01);
G01N 2291/02818 (2013.01); **G01N 2291/02836** (2013.01)

Citation (search report)

- [XY] GB 1578031 A 19801029 - ICI LTD
- [XY] WO 8204122 A1 19821125 - TS TANKSYSTEM AG [CH], et al
- [XY] EP 0409732 A1 19910123 - MATERIEL & AUXILIAIRE [FR]
- See references of WO 9303340A1

Designated contracting state (EPC)

DE GB IT NL

DOCDB simple family (publication)

WO 9303340 A1 19930218; AU 2373192 A 19930302; CN 1045658 C 19991013; CN 1069123 A 19930217; EP 0596966 A1 19940518;
EP 0596966 A4 19940921; JP H07501138 A 19950202

DOCDB simple family (application)

US 9205892 W 19920716; AU 2373192 A 19920716; CN 91112613 A 19911230; EP 92916332 A 19920716; JP 50358393 A 19920716