

Title (en)

A SYSTEM AND METHOD FOR MEASURING THE AMOUNT OF FUEL DELIVERED IN A BUNKERING OPERATION

Title (de)

SYSTEM UND VERFAHREN ZUR MESSUNG DER MENGE DES IN EINEM BUNKERUNGSBETRIEB ZUGEFÜHRTEN KRAFTSTOFFES

Title (fr)

SYSTÈME ET PROCÉDÉ DE MESURE DE LA QUANTITÉ DE COMBUSTIBLE FOURNIE DANS UNE OPÉRATION DE MISE EN SOUTE

Publication

**EP 3137961 A4 20180124 (EN)**

Application

**EP 15786455 A 20150424**

Priority

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- DK 2015050104 W 20150424

Abstract (en)

[origin: WO2015165468A1] A system (10) for measuring the amount of bunker fuel, such as for example heavy fuel oil, transferred during a bunkering activity. The system (10) comprises a pipe (11) configured to transport bunker fuel, an air/gas separator (14) connected to the pipe (11) at a first position, a Coriolis flow meter (20) configured to measure a flowrate of the bunker fuel, the pipe (11) comprising a downwardly extending portion (15) arranged downstream of the first position and upstream of the Coriolis flow meter (20), an electronically controlled backpressure valve (22) in the pipe (11) at a position downstream of the Coriolis flow meter (20), the backpressure valve (22) with an adjustable restriction effect (22) on any fluid flowing through the backpressure valve (22), a pressure sensor (16) at a second position downstream of the first position and of upstream of the backpressure valve (22), and an electronic control unit (50) in electrical communication with the Coriolis flow meter (20), with the pressure sensor (16) and with the electronically controlled backpressure valve (22). The electronic control unit (50) is configured to control the backpressure valve (22) using the signal from the pressure sensor (16) in order to maintain the pressure sensed by the pressure sensor (16) close to a predetermined pressure value.

IPC 8 full level

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Citation (search report)

- [I] US 2014076408 A1 20140320 - ZIMMER PATRICK JOHN [US], et al
- [A] US 5390547 A 19950221 - LIU KE-TIEN [US]
- [A] US 4688418 A 19870825 - CHEUNG YIN L [US], et al
- [A] WO 2012160293 A1 20121129 - AIR LIQUIDE [FR], et al
- [A] WO 2012161922 A1 20121129 - MICRO MOTION INC [US], et al
- [A] US 5922969 A 19990713 - HAAR THOMAS [DE]
- [A] US 4467826 A 19840828 - LORENTZ WERNER [DE]
- [A] "Flow & level measurement", vol. 4, 2001, WWW.OMEGA.COM, www.omega.com/literature/transactions/transactions\_Vol\_IV.pdf, article OMEGA:  
"Flow & level measurement", pages: 2 - 116, XP055431240
- See references of WO 2015165468A1

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