

Title (en)  
MEASURING SYSTEM FOR A MEDIUM FLOWING IN A PROCESS LINE

Title (de)  
MESSSYSTEM FÜR EIN IN EINER PROZESSLEITUNG STRÖMENDES MEDIUM

Title (fr)  
SYSTEME DE MESURE POUR UN FLUIDE S'ÉCOULANT DANS UNE CONDUITE DE PROCESSUS

Publication  
**EP 2162723 A2 20100317 (DE)**

Application  
**EP 08785888 A 20080627**

Priority  
• EP 2008058319 W 20080627  
• DE 102007030691 A 20070630

Abstract (en)  
[origin: CA2692179A1] The invention relates to a measuring system for measuring a density of a medium flowing in a process line, said medium being variable regarding its thermodynamic state, especially at least being compressible, along an imaginary axis of flow of the measuring system. The measuring system comprises at least one temperature sensor that is located in a temperature measuring point and that primarily reacts to a local temperature,  $\theta$ , of a medium flowing past, said temperature sensor supplying at least one temperature measurement signal that is influenced by the local temperature of the medium to be measured, at least one pressure sensor that is located in a pressure measuring point and that primarily reacts to a local, especially static, pressure,  $p$ , of a medium flowing past, said pressure sensor supplying at least one pressure measurement signal that is influenced by the local pressure,  $p$ , in the medium to be measured, and at least one electronic measuring unit that at least temporarily communicates with at least the temperature sensor and the pressure sensor. The electronic measuring unit generates at least temporarily an especially digital, density value, using the temperature measurement signal and at least the pressure measurement signal, said density value momentarily representing a local density,  $\rho$ , which the flowing medium has in an especially stationary, virtual density measuring point that is interspaced from the pressure measuring point and/or the temperature measuring point along the axis of flow at a defined distance.

IPC 8 full level  
**G01N 9/00** (2006.01)

CPC (source: EP)  
**G01N 9/266** (2013.01)

Citation (search report)  
See references of WO 2009003961A2

Citation (examination)  
• US 4984456 A 19910115 - TAKAHASHI HIROSHI [JP]  
• US 4048854 A 19770920 - HERZL PETER J  
• US 4455877 A 19840626 - BLECHINGER CHESTER J [US], et al

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**DE 102007030691 A 20070630**; CA 2692179 A 20080627; CN 200880021881 A 20080627; EP 08785888 A 20080627; EP 2008058319 W 20080627; RU 2010103051 A 20080627