

Title (en)

COMPACT PRECISION MEASURING HEAD, WHICH IS RESISTANT TO HIGH-PRESSURE, FOR MEASURING THE OPTICAL REFRACTIVE INDEX IN LIQUIDS

Title (de)

HOCHDRUCKFESTER KOMPAKTER PRÄZISIONSMESSKOPF FÜR OPTISCHE BRECHUNGSINDEXMESSUNGEN IN FLÜSSIGKEITEN

Title (fr)

TETE DE MESURE DE PRECISION RESISTANTE AUX PRESSIONS ELEVEES DESTINEE A DES MESURES OPTIQUES D'INDICES DE REFRACTION DANS DES LIQUIDES

Publication

EP 1257808 A1 20021120 (DE)

Application

EP 01903717 A 20010208

Priority

- DE 10007818 A 20000221
- EP 0101338 W 20010208

Abstract (en)

[origin: WO0163252A1] The invention relates to a compact precision measuring head for measuring the refractive index in liquids and gases with an extremely high degree of accuracy, under environmental pressures of 1000 bar and greater. The measuring head consists of a single-block (1) glass reference prism connected to a stable high-pressure bulkhead fitting (2) which serves as the linking element between the measuring medium and the pressure-resistant interior of the instrument housing, said housing containing the optoelectronic assemblies for generating the electric measuring signals for the subsequent calculation of the desired refractive index values. The measuring head is designed in particular for economic, automatic mass production on computerized machines. Absolute calibration takes place using normal liquids and/or gases to an accuracy of approximately 10^{-6} ... 10^{-7} .

IPC 1-7

G01N 21/43

IPC 8 full level

G01N 21/43 (2006.01); **G01N 21/03** (2006.01)

CPC (source: EP US)

G01N 21/431 (2013.01 - EP US); **G01N 21/0317** (2013.01 - EP US)

Citation (search report)

See references of WO 0163252A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0163252 A1 20010830; **WO 0163252 B1 20020214**; AU 3171101 A 20010903; DE 10007818 A1 20010823; EP 1257808 A1 20021120; US 2004145730 A1 20040729; US 7030976 B2 20060418

DOCDB simple family (application)

EP 0101338 W 20010208; AU 3171101 A 20010208; DE 10007818 A 20000221; EP 01903717 A 20010208; US 20489003 A 20030411