



US006988424B2

(12) **United States Patent**
Akerblom

(10) **Patent No.:** **US 6,988,424 B2**
(45) **Date of Patent:** **Jan. 24, 2006**

(54) **METHOD AND ARRANGEMENT FOR POSITIONING A SENSOR HEAD FOR MEASURING WHILE OBJECT IS MOVING**

(75) Inventor: **Bengt Akerblom, Varby (SE)**

(73) Assignee: **Daprox AB, Skarholmen (SE)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 176 days.

(21) Appl. No.: **10/466,675**

(22) PCT Filed: **Jan. 23, 2002**

(86) PCT No.: **PCT/SE02/00108**

§ 371 (c)(1),
(2), (4) Date: **Jul. 21, 2003**

(87) PCT Pub. No.: **WO02/061369**

PCT Pub. Date: **Aug. 8, 2002**

(65) **Prior Publication Data**

US 2004/0045381 A1 Mar. 11, 2004

(30) **Foreign Application Priority Data**

Jan. 23, 2001 (SE) 0100181

(51) **Int. Cl.**

G01B 13/00 (2006.01)

G01B 13/06 (2006.01)

G01B 121/04 (2006.01)

G01B 21/08 (2006.01)

G01D 3/08 (2006.01)

(52) **U.S. Cl.** **73/866.5**

(58) **Field of Classification Search** 73/37.5-37.7,
73/866.5, 159; 324/206, 229-231

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,832,217 A *	4/1958	Hamren	73/170.02
2,954,521 A *	9/1960	McKee	324/72.5
4,325,249 A *	4/1982	Berglund	73/37.6
4,647,855 A *	3/1987	Berglund	73/37.7 X
4,912,410 A *	3/1990	Morley	324/230
5,824,901 A *	10/1998	van Seeters	73/514.32
5,865,059 A *	2/1999	Alessandro	73/159
6,318,153 B1 *	11/2001	Dumberger et al.	73/37.6

FOREIGN PATENT DOCUMENTS

DE	19632385 A1 *	3/1997
EP	524218 B1 *	10/1994
EP	811826 A2 *	12/1997
SE	415 801	7/1980
SE	434 997	7/1984
SE	515 644	7/2001

* cited by examiner

Primary Examiner—Thomas P. Noland

(74) *Attorney, Agent, or Firm*—Young & Thompson

(57) **ABSTRACT**

During measurement by means of a measurement arrangement (4) in which a sensor head (7) is axially movable in a sensor housing (6) and is intended, in the measurement position, to rest against a measured object (2) via an air cushion, the orientation of the sensor head in the sensor housing is monitored. When the orientation of the sensor housing deviates by a predetermined value from the normal, the measurement arrangement is temporarily moved a distance away from the measured object and is then returned to the measurement position again for continued measurement, with the sensor head now in the normal position relative to the sensor housing. In such a measurement arrangement, a monitoring device (24) is provided to automatically produce the stated movement of the measurement arrangement.

8 Claims, 2 Drawing Sheets

