

Title (en)
METROLOGICAL STYLUS ASSEMBLY

Title (de)
METROLOGISCHE STIFTANORDNUNG

Title (fr)
ENSEMBLE PALPEUR DE METROLOGIE

Publication
EP 0759148 A1 19970226 (EN)

Application
EP 95911392 A 19950315

Priority

- GB 9500559 W 19950315
- GB 9405419 A 19940318
- GB 9406709 A 19940405

Abstract (en)
[origin: WO9525940A2] A metrological instrument usable for scanning a small area (for example 0.5 mm x 0.5 mm) of the surface of a workpiece to detect roughness features has a stylus assembly in which a short (10 mm) lightweight (5 mg) stylus arm (9) is loaded with a hairspring (17) which provides most of the static stylus force (100 mg force). This construction provides a high acceleration for the stylus tip (13), allowing the stylus to track features of an amplitude over 0.1 μm with data points 1 μm apart and a stylus traverse speed of at least 5 mm s⁻¹. The stylus assembly (7) is supported and driven by a two dimensional traverse unit (5) having two one dimensional stages. Each stage has a balanced compound rectilinear spring mounting using flexure springs arranged to resist gravity through their resistance to bending within the plane of the spring.

IPC 1-7
G01B 7/34; **G01B 5/28**

IPC 8 full level
G01B 5/20 (2006.01); **G01B 5/012** (2006.01); **G01B 5/28** (2006.01); **G01B 7/34** (2006.01); **G01B 21/00** (2006.01)

CPC (source: EP)
G01B 5/28 (2013.01); **G01B 7/34** (2013.01)

Citation (search report)
See references of WO 9525940A2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
WO 9525940 A2 19950928; **WO 9525940 A3 19960222**; CN 1157653 A 19970820; EP 0759148 A1 19970226; JP H09511331 A 19971111

DOCDB simple family (application)
GB 9500559 W 19950315; CN 95192827 A 19950315; EP 95911392 A 19950315; JP 52445395 A 19950315