

Title (en)

External-coupled electronic angle measurement apparatus

Title (de)

Externgekoppelte elektronische Winkelmessvorrichtung

Title (fr)

Appareil de mesure d'angle électronique couplé de manière externe

Publication

EP 2394792 A1 20111214 (EN)

Application

EP 10165326 A 20100609

Priority

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Abstract (en)

The present invention proposes an external-coupled electronic angle measurement apparatus installed on a hand tool (10) including a housing (20), a display element (30), an angle detection system (40) and a coupling portion (50). The housing (20) is movable through the coupling portion (50) to fasten the external-coupled electronic angle measurement apparatus to a desired location of the driving head (12), driving bar (11), sleeve coupling head (13) or hand tool (10) to accurately measure turning angles of a screw driven by the hand tool (10) through the angle detection system (40) and display the result on the display element (30).

IPC 8 full level

B25B 23/142 (2006.01); **G01B 5/24** (2006.01); **G01B 7/30** (2006.01)

CPC (source: EP)

B25B 23/1425 (2013.01)

Citation (applicant)

US 5589644 A 19961231 - BECKER THOMAS P [US], et al

Citation (search report)

- [X] DE 102007055028 A1 20090520 - RICHARD ABR HERDER KG [DE]
- [X] EP 2147751 A1 20100127 - BETA UTENSILI SPA [IT]
- [X] US 2003065474 A1 20030403 - MCGEE PHILLIP [US], et al
- [X] WO 9616761 A1 19960606 - SNAP ON TOOLS CORP [US]
- [X] DE 202007002793 U1 20070510 - WILLE GMBH & CO KG EDUARD [DE]
- [X] DE 202004017472 U1 20050105 - HAZET WERK ZERVER HERMANN [DE]
- [A] DE 29622317 U1 19971127 - WILLE GMBH & CO [DE]

Citation (examination)

US 6244778 B1 20010612 - CHESBROUGH RICHARD M [US]

Cited by

EP2857147A1; US8886492B2; US8918292B2

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

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