

Title (en)

METHOD AND APPARATUS FOR MEASURING FILM THICKNESS AND FILM THICKNESS GROWTH

Title (de)

VERFAHREN UND VORRICHTUNG ZUM MESSEN DER SCHICHTDICKE UND DES WACHSTUMS DER SCHICHTDICKE

Title (fr)

PROCEDE ET APPAREIL POUR MESURER L'EPAISSEUR D'UN FILM ET LA CROISSANCE DE L'EPAISSEUR D'UN FILM

Publication

**EP 1891405 A4 20140122 (EN)**

Application

**EP 06773455 A 20060619**

Priority

- US 2006023678 W 20060619
- US 69163805 P 20050617

Abstract (en)

[origin: WO2006138678A2] A device for measuring thickness and/or rate of thickness increase of a film comprises at least one piezoelectric element, and first and second electrodes. A method of measuring thickness and/or rate of thickness increase of a film comprises applying a voltage across a piezoelectric element from a first electrode to a second electrode, thereby causing the piezoelectric element to vibrate, and measuring the rate of vibration of the piezoelectric element. Heat and/or cooling may be applied to the piezoelectric element. The piezoelectric element may be formed of quartz crystal, e.g., doubly rotated cut quartz crystal having a value for in the range of from about (33) degrees to about (36) degrees and a value for in the range of from about (18) degrees to about (20) degrees. Alternatively or additionally, the piezoelectric element may comprise a crystal having at least a first curved surface.

IPC 8 full level

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CPC (source: EP)

**G01B 7/066** (2013.01); **G01N 29/12** (2013.01); **G01N 2291/0251** (2013.01)

Citation (search report)

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- [X] JP S58223009 A 19831224 - NIPPON SOKEN
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- [X] US 5112642 A 19920512 - WAJID ABDUL [US]
- See references of WO 2006138678A2

Designated contracting state (EPC)

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