

Title (en)

DEVICE FOR DETERMINING A SET OF SPATIAL THICKNESS DATA FOR A THIN FILM ON THE SURFACE OF A SUBSTRATE, BY MEASUREMENT OF INFRARED EMISSION

Title (de)

VORRICHTUNG ZUR BESTIMMUNG EINES SATZES VON RÄUMLICHEN DATEN FÜR EINE DÜNNSCHICHT AUF DER OBERFLÄCHE EINES SUBSTRATS DURCH MESSUNG VON INFRAROTEMISSIONEN

Title (fr)

DISPOSITIF DE DETERMINATION D'UN ENSEMBLE DE DONNEES SPATIALES D'EPAISSEUR D'UNE COUCHE MINCE A LA SURFACE D'UN SUBSTRAT, PAR MESURE D'EMISSION INFRA-ROUGE

Publication

EP 2877812 A1 20150603 (FR)

Application

EP 13753590 A 20130726

Priority

- FR 1257234 A 20120726
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Abstract (en)

[origin: WO2014016416A1] The subject of the invention is a device for determining a set of spatial thickness data $d(x,y)$ for a thin film to be analysed contained in a thin-film(s)/substrate assembly, characterised in that it comprises: means for heating said thin film so as to generate a band of emitted infrared radiation of energy $W(x, y)$ dependent on an emissivity factor $\epsilon[\lambda, d(x,y)]$ itself dependent on the emission wavelength λ and on the thickness $d(x,y)$ of said layer, said heating means being supplied by control means; optoelectronic means for detecting said band of infrared radiation allowing a set of electronic data $V(x, y)$ to be defined; processing means for: o determining a theoretical calibration curve $d(V)$ giving the variation of the thickness as a function of an electronic datum (V) dependent on properties of the optoelectronic detecting means and on the emissivity of a reference thin film of the same nature as said thin film to be analysed contained in the same thin-film(s)/substrate assembly; and o determining the set of spatial thickness data $d(x,y)$ for said thin film to be analysed from the data $V(x, y)$ and said calibration curve $d(V)$; and means for returning the set of thickness data $d(x, y)$ of said thin film.

IPC 8 full level

G01B 11/06 (2006.01)

CPC (source: EP)

G01B 11/0658 (2013.01)

Citation (search report)

See references of WO 2014016416A1

Citation (examination)

- DE 102006009912 A1 20070913 - DAIMLER CHRYSLER AG [DE]
- GB 2220065 A 19891228 - ATOMIC ENERGY AUTHORITY UK [GB]
- JP 2006173496 A 20060629 - IBIDEN CO LTD

Designated contracting state (EPC)

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