

Title (en)

METHOD AND SYSTEM FOR CONTROLLING THE CHEMICAL MECHANICAL POLISHING OF SUBSTRATES BY CALCULATING AN OVERPOLISHING TIME AND/OR A POLISHING TIME OF A FINAL POLISHING STEP

Title (de)

VERFAHREN UND SYSTEM ZUR REGELUNG DER NACHPOLIERDAUER UND/ODER DER POLIERDAUER IN DER ENDBEARBEITUNG BEIM CHEMISCH MECHANISCHEN POLIEREN

Title (fr)

PROCEDE ET SYSTEME DESTINES A CONTROLER LE POLISSAGE MECANO-CHIMIQUE DE SUBSTRATS PAR CALCUL DU TEMPS DE SURPOLISSAGE ET/OU DU TEMPS DE POLISSAGE D'UNE OPERATION DE POLISSAGE FINAL

Publication

EP 1478494 B1 20051012 (EN)

Application

EP 02798618 A 20021220

Priority

- DE 10208165 A 20020226
- US 0241668 W 20021220
- US 26161202 A 20020930

Abstract (en)

[origin: WO03072305A1] A method and a controller 150 for the chemical mechanical polishing (CMP) of substrates 121 and, in particular, for the chemical mechanical polishing of metallization layers is disclosed. In a linear model of the CMP process, the erosion of the metallization layer to be treated is determined by the overpolish time and possibly by an extra polish time on a separate polishing platen for polishing the dielectric layer, wherein the CMP inherent characteristics are represented by sensitivity parameters derived empirically. Moreover, the control operation is designed so that even with a certain inaccuracy of the sensitivity parameters due to subtle process variations, a reasonable controller response is obtained.

IPC 1-7

B24B 49/03; **B24B 37/04**

IPC 8 full level

B24B 51/00 (2006.01); **B24B 37/04** (2012.01); **B24B 49/03** (2006.01); **H01L 21/304** (2006.01)

CPC (source: EP)

B24B 37/042 (2013.01); **B24B 49/03** (2013.01)

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

WO 03072305 A1 20030904; AU 2002364041 A1 20030909; CN 100366386 C 20080206; CN 1620357 A 20050525; EP 1478494 A1 20041124; EP 1478494 B1 20051012; TW 200305240 A 20031016; TW I267156 B 20061121

DOCDB simple family (application)

US 0241668 W 20021220; AU 2002364041 A 20021220; CN 02828329 A 20021220; EP 02798618 A 20021220; TW 92103618 A 20030221