

Title (en)

MEGASONIC CLEANING USING SUPERSATURATED CLEANING SOLUTION

Title (de)

MEGASCHALLREINIGUNG UNTER VERWENDUNG EINER ÜBERSÄTTIGTEN REINIGUNGSLÖSUNG

Title (fr)

NETTOYAGE MEGASONIQUE UTILISANT UNE SOLUTION DE NETTOYAGE SURSATUREE

Publication

EP 1631396 A4 20130814 (EN)

Application

EP 04776442 A 20040610

Priority

- US 2004018464 W 20040610
- US 47760203 P 20030611

Abstract (en)

[origin: WO2005006396A2] A method and system for the megasonic cleaning of one or more substrates that reduces damage to the substrate(s) resulting from the megasonic energy. The substrates are supported in a process chamber and contacted with a cleaning solution comprising a cleaning liquid having carbon dioxide gas dissolved in the cleaning liquid in such amounts that the carbon dioxide gas is at a supersaturated concentration for the conditions within the process chamber. Megasonic energy is then transmitted to the substrate. The cleaning solution provides protection from damage resulting from the application of megasonic/acoustical energy. In another aspect, the invention is a system for carrying out the method. The invention is not limited to carbon dioxide but can be used in conjunction with any gas that, when so dissolved in a cleaning liquid, protects substrates from being damaged by the application of megasonic/acoustical energy.

IPC 8 full level

B08B 3/00 (2006.01); **B08B 3/12** (2006.01); **B08B 6/00** (2006.01); **B08B 7/04** (2006.01); **H01L 21/67** (2006.01)

IPC 8 main group level

H01L (2006.01)

CPC (source: EP KR)

B08B 3/12 (2013.01 - EP); **H01L 21/304** (2013.01 - KR); **H01L 21/67051** (2013.01 - EP)

Citation (search report)

- [X] US 6290777 B1 20010918 - IMAOKA TAKASHI [JP], et al
- [X] US 2001009155 A1 20010726 - MATSUNO KOUSAKU [JP], et al
- [X] US 5562778 A 19961008 - KORETSKY RONALD G [US], et al
- [A] WO 03033178 A1 20030424 - PROCTER & GAMBLE [US]
- See references of WO 2005006396A2

Designated contracting state (EPC)

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DOCDB simple family (publication)

WO 2005006396 A2 20050120; **WO 2005006396 A3 20050915**; CN 1849182 A 20061018; EP 1631396 A2 20060308; EP 1631396 A4 20130814; JP 2007502032 A 20070201; JP 4643582 B2 20110302; KR 101110905 B1 20120220; KR 20060037270 A 20060503; TW 200507954 A 20050301; TW I330552 B 20100921

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US 2004018464 W 20040610; CN 200480020523 A 20040610; EP 04776442 A 20040610; JP 2006533684 A 20040610; KR 20057023902 A 20040610; TW 93116958 A 20040611