

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MIPOX CORPORATION,
Petitioner,

v.

INTERNATIONAL TEST SOLUTIONS, INC.,
Patent Owner.

Case IPR2017-00938
Patent 6,777,966 B1

Before JO-ANNE M. KOKOSKI, JEFFREY W. ABRAHAM, and
JOHN F. HORVATH, *Administrative Patent Judges*.

HORVATH, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. Background

Mipox Corporation¹ (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute *inter partes* review of claims 26 and 28 of U.S. Patent No. 6,777,966 B1 (Ex. 1001, “the ’966 patent”). International Test Solutions, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”).

Upon consideration of the Petition and Preliminary Response, we are persuaded, under 35 U.S.C. § 314(a), that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of claims 26 and 28 of the ’966 patent. Accordingly, we institute an *inter partes* review of these claims.

B. Related Matters

Petitioner identifies the following as a matter that could affect, or be affected by, a decision in this proceeding: *Int’l Test Solutions, Inc. v. Mipox Int’l Corp.*, Case No. 3:16-cv-00791 (N.D. Cal.). Pet. 1. Patent Owner identifies the same matter. Paper 3, 2.

C. Evidence Relied Upon

Reference		Date ²	Exhibit
Okubo	US 2002/0028641 A1	Feb. 16, 1999	Ex. 1006
Angell	US 6,019,663	Feb. 20, 1998	Ex. 1007

¹ Petitioner further identifies Mipox International Corporation and MGN International, Inc. as real parties-in-interest. Pet. 1.

² All dates refer to the filing date of the respective references.

Reference		Date ²	Exhibit
Yamasaka	US 5,968,282	Nov. 5, 1998	Ex. 1008
Yamasaka '104	US 6,130,104	Apr. 6, 1998	Ex. 1009

Petitioner also relies on the Declaration of Ira M. Feldman. Ex. 1013.

D. The Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Reference(s)	Basis	Claims Challenged
Okubo	§ 102(e)	26 and 28
Okubo and Angell	§ 103(a)	26 and 28
Yamasaka and Angell	§ 103(a)	26 and 28
Yamasaka '104 and Angell	§ 103(a)	26 and 28

II. ANALYSIS

A. The '966 Patent

The '966 patent relates to a cleaning device for cleaning probe elements of a probe testing card for testing semiconductor wafers. Ex. 1001, Abstract. Figure 4 of the '966 patent is reproduced below.

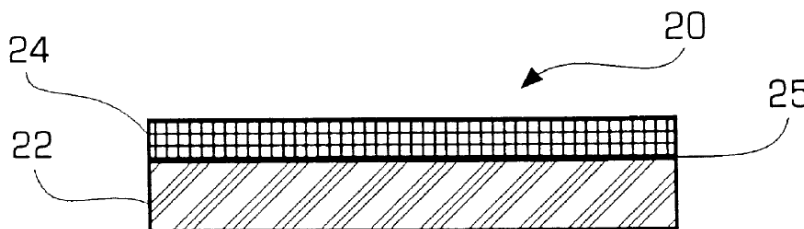


FIGURE 4

Figure 4 is a cross-sectional view of a schematic illustration of a cleaning device according to the invention described in the '966 patent. *Id.* at 4:18–19. Cleaning device 20 includes substrate 22 and pad 24 adhered to surface 25 of substrate 22. *Id.* at 4:67–5:2.

Substrate 22 can be any material having sufficient strength to resist breaking when probes contact pad 24, including plastic, metal, glass, silicon, or ceramic. Ex. 1001, 5:2–7. Preferably, substrate 22 is a semiconductor wafer having a flat mirror finish or a slightly abrasive finish capable of burnishing the testing probe tips. *Id.* at 5:7–13. Pad 24 can be any material with predetermined properties that contribute to the cleaning of the testing probe tips, such as pads with appropriate abrasiveness, density, elasticity, or tackiness. *Id.* at 5:14–18. Pad 24 is preferably made of an elastomeric material such as a natural or synthetic rubber or polymer having a predetermined elasticity, density, and surface tension that allows the testing probe tips to penetrate the elastomeric material and be cleaned by it without being damaged. *Id.* at 5:27–37.

Cleaning device 20 preferably has the same size and shape as a semiconductor wafer undergoing testing, and is placed in a wafer cleaning tray. Ex. 1001, 5:60–63. When cleaning of the testing probes is needed, the testing apparatus loads cleaning device 20 from the wafer cleaning tray and mounts it on the same chuck on which semiconductor wafers undergoing testing are mounted. *Id.* at 6:6–8.

Petitioner challenges the patentability of independent claims 26 and 28 of the '966 patent. Claim 26, which is representative, is reproduced below.

26. A cleaning device for cleaning the probe elements in a semiconductor testing apparatus, the cleaning device comprising:

a substrate having a configuration to be introduced into the testing apparatus during the normal testing operating of the testing apparatus, wherein the substrate comprises a semiconductor wafer having a surface; and

a pad, secured to the substrate, the pad having predetermined characteristics that cause the pad to clean debris from the probe elements when the probe elements contact the pad so that the probe elements are cleaned, without modification or damage, during the normal operation of the testing machine, wherein the semiconductor wafer surface has microroughness which burnishes the probe elements.

Ex. 1001, 10:23–37. Claim 28 is substantially similar in scope to claim 26, but differs in two respects. First, claim 28 does not require the substrate to be configured to be introduced into the testing apparatus during normal testing operations, but does require the substrate to have a predetermined configuration appropriate for particular cleaning probe elements. *Compare id.* at 10:26–29, *with id.* at 10:56–59. Second, claim 28 does not require the cleaning pad to clean the probe elements without modification or damage during normal operation of the testing machine. *Compare id.* at 10:30–37, *with id.* at 10:60–65.

B. Claim Construction

The Board interprets claims of an unexpired patent using the broadest reasonable interpretation in light of the specification of the patent in which

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