

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE GILLETTE COMPANY

Petitioner

v.

ZOND, LLC
Patent Owner

Case IPR2014-01014
Patent 6,853,142

ZOND LLC'S PATENT OWNER PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107(a)

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 a. Kudryavtsev – A. A. Kudryavtsev and V.N. Skerbov, Ionization relaxation in a plasma produced by a pulsed inert-gas discharge, Sov. Phys. Tech. Phys. 28(1), pp. 30-35, January 1983 (Ex. 1204), 23

 b. Mozgrin – D.V. Mozgrin, et al, High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research, Plasma Physics Reports, Vol. 21, No. 5, pp. 400-409, 1995 (Exhibit 1203). 26

 c. Wang – U.S. Patent No. 6,413,382 (Exhibit 1205). 28

 2. The Petitioner Fails To Show That It Would Have Been Obvious To Combine The Cylindrical Tube System Without A Magnet Of Kudryavtsev With Either The Mozgrin or Wang Magnetron System. 30

 B. The Petition fails to demonstrate how the alleged combinations teach every element of the challenged claims. 36

1. The cited references do not teach that an electric field across the gap is “a quasi-static electric field,” as recited in dependent claims 24 and 32.36

2. The cited references do not teach that “a rise time of the electric field is chosen to increase an ionization rate of the excited atoms in the weakly-ionized plasma,” as recited in claim 26.39

3. The cited references do not teach that “the strongly ionized plasma is substantially uniform proximate to the cathode,” as recited in claims 27 and 38 and “selecting at least one of a pulse amplitude and a pulse width of the electrical pulse in order to cause the strongly-ionized plasma to be substantially uniform in an area adjacent to a surface of the cathode,” as required by dependent claim 37.41

4. The cited references do not teach that “a dimension of the gap between the anode and the cathode is chosen to increase an ionization rate of the excited atoms in the weakly-ionized plasma,” as required by dependent claim 28.44

C. The Petition Failed to Identify Any Compelling Rationale for Adopting Redundant Grounds of Rejection Under Both Mozgrin and Wang.47

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I. INTRODUCTION

The Petitioner has represented in a motion for joinder that this petition “is identical to the Intel IPR2014-00496 in all substantive respects, includes identical exhibits, and relies upon the same expert declarant.” Accordingly, based upon that representation, the Patent Owner opposes review on the same basis presented in opposition to Intel’s request no. IPR2014-00496, which is repeated below:

The Board should deny the present request for *inter partes* review of U.S. Patent No. 6,853,142 (“the ’142 patent”) because there is not a reasonable likelihood that the Petitioner will prevail at trial with respect to at least one claim of the ’142 patent.¹

Indeed, there are six different and independent groups of reasons why the Petitioner cannot prevail. First, the references that are primarily relied upon by the Petitioner (*i.e.*, Mozgrin and Wang) were already considered by the Examiner and overcome during the prosecution of the application that led to the issuance of the ’142 patent. These references were considered by 6

¹ 35 U.S.C. § 314(a).

different examiners and overcome during the prosecution of 9 other patents that are related to the '142 patent over nearly a 10 year period.²

Second, all of the Petitioner's obviousness rejections are predicated on the false assumption that a skilled artisan could have achieved the combination of i) an anode; ii) a cathode that is positioned adjacent to the anode and forming a gap there between; iii) an ionization source generating a weakly-ionized plasma proximate to the cathode, and iv) a power supply that generates an electric field across the gap to produce a highly-ionized plasma, as required by independent claim 21 and as similarly required by independent claim 31 of the '142 patent by combining the teachings of Kudryavtsev with either Mozgrin or Wang.³

² Examiners Douglas Owens, Tung X. Le, Rodney McDonald, Wilson Lee, Don Wong, and Tuyet T. Vo allowed U.S. Patents 7,147,759, 7,808,184, 7,811,421, 8,125,155, 6,853,142, 7,604,716, 6,896,775, 6,896,773, 6,805,779, and 6,806,652 over Mozgrin and Wang over nearly a decade from the time that the application for the '759 patent was filed on 9/30/2002 to the time that the '155 patent issued on 2/28/2012.

³ Petition at pp. 14-60.

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