

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION

Petitioner

v.

ZOND, LLC
Patent Owner

Case IPR2014-00443
Patent 7,147,759

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

TABLE OF CONTENTS

I. INTRODUCTION 1

II. TECHNOLOGY BACKGROUND 9

 A. Overview Of Magnetron Sputtering Systems. 9

 B. The '759 patent: Dr. Chistyakov invents a new magnetically enhanced sputtering source that creates a multi-step ionization process generating highly-ionized plasma from weakly ionized plasma without forming an arc discharge. 10

III. SUMMARY OF THE PETITIONER’S PROPOSED GROUNDS FOR REVIEW .. 13

IV. ZOND’S CLAIM CONSTRUCTIONS..... 15

 A. The construction of “weakly ionized plasma” and “strongly ionized plasma.” 16

 B. The construction of “multi-step ionization process”. 17

V. THERE IS NO REASONABLE LIKELIHOOD OF PETITIONER PREVAILING AS TO A CHALLENGED CLAIM OF THE '738 PATENT. 20

 A. The Petition failed to set forth a proper obviousness analysis..... 21

 B. The Petition failed to demonstrate any motivation to combine. 23

 1. Scope and content of prior art. 26

 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. 1004), 26

 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 (Ex. 1003). 29

 c. Wang – U.S. Patent No. 6,413,382 (Exhibit 1005)..... 32

 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. 34

 C. The Petition fails to demonstrate how the alleged combinations teach every element of the challenged claims. 40

1.	The cited references do not teach generating “the voltage pulse with an amplitude and a rise time that increases an excitation rate of ground state atoms that are present in the weakly-ionized plasma to create a multi-step ionization process that generates a strongly-ionized plasma,” as recited in independent claim 1.	41
2.	The cited references do not teach a “multi-step ionization process comprising exciting the ground state atoms to generate excited atoms, and then ionizing the excited atoms within the weakly-ionized plasma without forming an arc discharge,” as recited in claim 1.....	48
D.	The Petition Fails to Identify Any Compelling Rationale for Adopting Redundant Grounds of Rejection Under Both Mozgrin and Wang.....	52
E.	The Petitioner Failed To Establish That The Mozgrin Thesis Is Prior Art.....	56
VI.	CONCLUSION.....	58

I. INTRODUCTION

The Board should deny the present request for *inter partes* review of U.S. Patent No. 7,147,759 (“the ’759 patent”) because there is not a reasonable likelihood that the Petitioner will prevail at trial with respect to at least one claim of the ’759 patent.¹

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 ’759 patent. Indeed, these references were considered by 6 different examiners and overcome during the prosecution of 9 other patents that are related to the ’759 patent over nearly a 10 year period.²

¹ 35 U.S.C. § 314(a).

² Examiners Douglas Owens, Tung X. Le, Rodney McDonald, Wilson Lee, Don Wong, and Tuyet T. Vo allowed U.S. Patents 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.

Upon realizing that there was no prior art that was closer to the claimed invention than the art that had already been considered and overcome at the patent office, the Petitioner resorted to a desperate strategy of filing an enormous number of IPR petitions (*i.e.*, 5 IPRs against the '759 patent and an additional 17 against related patents) and alleging that the Patent Owner had mischaracterized Mozgrin to the patent office.³

But this strategy cannot succeed because the Patent Owner did not make any mischaracterizations and could not have possibly tricked 6 different examiners to allow 10 patents over the course of nearly a decade by mischaracterizing a reference that all 6 Examiners could have easily read themselves. Rather, the Petitioner mischaracterized the prior art references in its Petition and failed to set forth a *prima facie* case of obviousness for the proposed grounds of rejection, as shown by five main reasons.

First, Petitioner neglected to follow the legal framework for an obviousness analysis set forth long ago by the Supreme Court.⁴ That

³ Petition, p. 7.

⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *see also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 399 (2007) (“While the sequence

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.