

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD,
TSMC NORTH AMERICA CORP.,
FUJITSU SEMICONDUCTOR LIMITED AND
FUJITSU SEMICONDUCTOR AMERICA, INC.

Petitioner

v.

ZOND, LLC
Patent Owner

U.S. Patent No. 6,896,775

Inter Partes Review Case No. 2014-01482

**PATENT OWNER'S PRELIMINARY RESPONSE
UNDER 37 CFR § 42.107(a)**

Claims 1 - 29

TABLE OF CONTENTS

I. INTRODUCTION..... I

II. TECHNOLOGY BACKGROUNDIII

 A. Overview of Plasma Generation Systems iii

 B. The ‘775 Patent: Dr. Chistyakov Invents an Improved Plasma Source. vi

III. SUMMARY OF PETITIONER’S PROPOSED GROUNDS XII

IV. CLAIM CONSTRUCTION UNDER 37 C.F.R. §§ 42.104(B)(3).....XIII

 A. Construction of “Weakly Ionized Plasma” and “Strongly Ionized Plasma” xiii

 B. Construction of “Ionizing a Feed Gas” (Claim 15).....xv

V. PETITIONER HAS FAILED TO SHOW A REASONABLE LIKELIHOOD OF PREVAILING. XVI

 A. Defect in Ground 1: Petitioner Failed To Demonstrate That Independent Claim 1 is Obvious In View of Mozgrin Combined with Kudryavtsev and Mozgrin’s Thesis xvi

 1. Overview of Independent Claim 1..... xvi

 2. Legal Standards for Comparison of the Claim to the Prior Art..... xvii

 3. Scope and Content of Prior Art. xix

 a. Mozgrin’s Thesis Is Not Prior Art. xix

 b. Overview of Mozgrin..... xxi

 c. Overview of Kudravtsev xxii

 4. Differences Between Claim 1 and the Prior Art. xxvi

 a. Differences Between Mozgrin and Claim 1 xxvi

 b. Petitioner Failed to Prove Inherency xxviii

 c. Incompatibilities of Kudryavtsev and Mozgrin.....xxx

 d. Differences Between Claim 1 and Kudravtsev..... xxxiii

e. Conclusion.....	xxxiii
B. Defect in Ground 1: Petitioner Failed To Demonstrate That Independent Claim 15 is Obvious In View of Mozgrin Combined with Kudryavtsev and Mozgrin’s Thesis.....	xxxiii
C. Defect in Ground 1: Petitioner Failed To Demonstrate A Reasonable Likelihood That the Dependent Claims Are Obvious	xxxvi
1. Dependent Claims 2, 7, 13, 18, 23, 29.	xxxvi
2. Dependent Claims 4, 5	xxxvii
3. Dependent Claim 6	xxxviii
4. Dependent Claims 7, 12, 13, 22, 23 and 29	xlii
D. Defect in Grounds 3, 7: Petitioner Failed To Demonstrate A Reasonable Likelihood That the Dependent Claim 27 is Obvious In View of Li.....	xliii
E. Defect In Ground 4: Petitioner Failed To Demonstrate That Parent Claims 1, 15 are Obvious In view of Wang Combined with Kudryavtsev	xliii
1. Overview of Wang.	xliv
2. Differences Between Wang and the Claims.	xlvi
3. Petitioner Failed To Prove Wang Inherently Implements the Claimed Type of Ionization.	l
4. Conclusion: Petitioner Fails to Show a Reasonable Likelihood of Prevailing on Ground 4 Because They Fail to shown that Claims 1, 15 are Obvious in View of Wang Combined With Kudryavtsev.	lii
F. Defect in Ground 4: Petitioner Failed To Demonstrate That Dependent Claims Are Obvious Wang et al.....	lii
1. Dependent Claims 4, 5.....	liii
2. Dependent Claim 6	lv
3. Dependent Claims 7, 12, 13, 22, 23 and 29	lvii
VI. CONCLUSION.....	LVII

Patent No. 6,896,775
IPR2014-01482

I. Introduction

The present petition for *inter partes* review of U.S. Patent No. 6,896,775 (“the ‘775 patent”) is first of two petitions filed by the Gillette Company challenging the ‘775 patent. This petition challenges two of the patent’s independent claims (1, 15) and all claims that depend from claims 1, 15.

The independent claims 1, 15 are directed to a method and apparatus for etching material from a substrate using a strongly-ionized plasma formed by a particular type of multi-stage ionization process in which neutral atoms in a weakly ionized gas are first excited from the ground state, and in which secondary electrons are formed from a cathode. The secondary electrons interact with the excited atoms to thereby ionize them to form a strongly ionized plasma. This is in contrast to a more conventional ionization process in which atoms are ionized directly from the ground state, without first achieving an excited state.

The Petition challenges claims 1 and 15 based on two prior art references, Mozgrin¹ and Wang,² combined with a prior art patent by

¹ Ex. 1002, Mozgrin.

² Ex. 1008, Wang patent No. 6,413,382 (“Wang”).

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