

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GLOBALFOUNDRIES U.S., INC.,

GLOBALFOUNDRIES DRESDEN MODULE ONE LLC & CO. KG,

GLOBALFOUNDRIES DRESDEN MODULE TWO LLC & CO. KG

Petitioner

v.

ZOND, LLC
Patent Owner

U.S. Patent No. 6,806,652

Inter Partes Review Case No. 2014-01089

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

Claim 35

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I. Introduction

The present petition for *inter partes* review is the third of three petitions by The Gillette Company that challenge the patentability of every claim of U.S. Patent No. 6,806,652 (“the ‘652 patent”). These petitions are part of a campaign seeking to annul ten Zond patents, and every one of hundreds of claims awarded to Zond. The present petition targets independent claim 35 of the ‘652 patent.

The ‘652 patent is generally directed to a plasma source for generating a super-ionized plasma having a high density of ions. The patent proposes a source in which a volume of feed gas is converted to an initial plasma that is filled with excited atoms. The plasma/excited atom mixture is then transported to a region that is proximate to a cathode assembly, where the conditions cause the transported mixture to super-ionize. This technique allows the initial plasma to be created from a volume of feed gas under a first condition that seeds the initial plasma with excited atoms. This facilitates the creation of a denser, super-ionized plasma in the next stage. Thus, the transportation of this mixture to another location exposes the mixture to a set of conditions that generate a super-ionized plasma from the mixture. This staged technique avoids the risk of arcing often associated with the formation of dense plasmas.

The present petition does not cite to any prior art reference that teaches the claimed plasma source. Instead it weaves together up to four different prior art references in an attempt to recreate the claims from carefully chosen excerpts. The selected references have publication dates that span nearly 20 years. Yet in all that time, not one reference wrote down or proposed the plasma source patented by Zond. Thus, as explained in this statement, the Petitioner inadvertently resorts to hindsight analysis in the hope of persuading the Board that the claim method was in fact obvious all along: Using the claims as a schematic, the Petitioner carefully selects a set of prior art references and assembles them to suit its objective.

In short, the art cited by the Petitioner for teaching sources of excited atoms date back to 1979,¹ nearly 24 years before Dr. Christyakov filed his application for the '652 patent. But in all that time the Petitioner can find no reference that suggested coupling the output of an excited atom source with a super-ionization stage, to transport excited atoms to a super-ionization region, despite the advantages of doing so. As the Supreme Court noted long ago:

But it is plain from the evidence, and from the very fact that it was not sooner adopted and used, that it did not, for years, occur in this light even to the most skilled persons. It may have been under

¹ Ex. 1005, Fahey.

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