UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLIED MATERIALS, INC.
Petitioner,

v.

DEMARAY LLC
Patent Owner.

Case IPR2021-00105
Patent No. 7,544,276

PATENT OWNER'S RESPONSE TO PETITONER'S NOTICE REGARDING MULTIPLE PETITIONS

Mail Stop "PATENT BOARD"
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

As the Board recognizes, "one petition should be sufficient to challenge the claims of a patent in most situations." PTAB Consolidated Trial Practice Guide ("TPG") (Nov. 2019) at 59. Petitioner instead filed two parallel petitions on the '276 patent challenging the same set of claims with no material differences and none of the exceptions articulated in the TPG. For example, Petitioner clearly can attack all the issues claims of the patent in a single petition; and it does not assert there is any priority dispute. *See* Paper 2 *generally*. As such, the Board should not institute more than one petition.

Petitioner nevertheless argues that the Board should entertain both of its petitions because it also represents the interest of Samsung and Intel and because only two petitions are filed among the three of them. Paper 2 at 2-3. That argument makes no sense: had Samsung and Intel filed petitions on their own, the Board would have also treated those petitions as either parallel or serial and they would also have to explain why the filing of those follow-on or parallel petitions are justified, including under the *General Plastics* factors.

The purported existence of a "wealth of prior art against the '276 patent" is also not an excuse for filing multiple petitions. Were that reason sufficient to justify the filing of multiple petitions, the Board would not have required petitioners who filed multiple petitions to provide "a succinct explanation of the differences between the petitions, why the issues addressed by the differences are material, and why the Board should exercise its discretion to

institute additional petitions if it identifies one petition that satisfies petitioner's burden under 35 U.S.C. § 314(a)." TPG at 60. Petitioner fails to make the requisite showing.

Petitioner instead first asserts that all the art asserted in the two petitions is allegedly "new." Paper 2 at 3. But as explained in the POPRs for IPR2021-00103 and IPR2021-00105, the combinations were used in substantially the same way as the Office has already considered. *See* 325(d) sections the POPRs for IPR2021-00103 and IPR2021-00105. Specifically, the claims were allowed because prior art of record did not disclose the claimed reactor system "combined with" the claimed filter. Ex. 1004 at 382, 434. The applicants explained that filter choice was not a mere design choice, but was important to the proper operation of the claimed reactor system that combined a bipolar pulsed DC power to the target and an RF bias on the substrate. Ex. 1052 at 1456-57, 1134. The inventors explained that the claimed filter needed to both (1) not to filter out too many frequencies and distort the DC pulse waveform and (2) not to allow RF power to couple into the DC power. *Id*.

In both petitions, Petitioner uses the base reference(s) for limitations related to the claimed reactor, and relies on the secondary "filter" reference directed a totally different reactor system to argue that a POSITA would have plucked the filter from the secondary "filter" reference and plug it into the

claimed reactor system. *See* IRP2021-00103 Pet. 30-36; IPR2021-00105 Pet. 37-40. This is summarized in the table below:

	Petition 1 (IPR2021-00103)	**Petition 2 (IPR2021-00105)**
reactor	Barber or Barber + Belkind[1]	Licata + Kelly
filter	Hirose	Collins
background knowledge	Ex. 1023, Ex. 1013, Ex. 1057, Ex. 1058, Ex. 1016, Ex. 1006, Ex. 1009, Ex. 1011, Ex. 1012, Ex. 1017, Ex. 1018, Ex. 1019, Ex. 1020, Ex. 1021, Ex. 1010; Ex. 1024-1026, 1062, 1067	Ex. 1023, Ex. 1013, Ex. 1057, Ex. 1058, Ex. 1016, Ex. 1006, Ex. 1009, Ex. 1011, Ex. 1012, Ex. 1017, Ex. 1018, Ex. 1019, Ex. 1020, Ex. 1021, Ex. 1010
Reason-to-combine arguments	filter helps "providing a stable waveform to the target so as to optimize film deposition by reducing or eliminating electrical interference from RF power supply" (Pet. 30-31) "the type of filter is a mere design choice," and "[t]he filter will necessarily be designed to	"the waveform of Licata's pulsed DC power supply 20 would determine the deposited film quality" (Pet. 38) "the type of filter is a mere design choice" & "[t]he filter will necessarily be designed

[1] Belkind and Kelly are both used to show the existence of a bipolar pulsed DC power system. *Compare* Ex. 1008, Fig. 1 *with* Ex. 1059, Fig. 2.

	reflect the frequency of operation" (Pet. 31-32) remote RF energy blocking: "A POSITA would have considered the known use and benefits of filters in plasma system for blocking interference /current of one power supply from another when considering *Barber*" (Pet. 32) "a filter would aid in preventing the RF power from the RF power supply from damaging the power supply" (Pet. 33) implementations "achieved through using known design and engineering skills" Pet. 35	to reflect the frequency of operation" (Pet. 38) "the use and benefits of filters in deposition systems/processes to block interference/current from one power supply from another power supply was known, and thus would have been in the mind of a POSITA …" (Pet. 39) "prevent such signals from RF bias power supply from affecting DC power supply 20 during Licata's process" (Pet. 37) implementations "achieved through the use of known … design, and relevant skills…" Pet. 39-40.

Regarding Petitioner's purported difference—that Barber/Barber-Belkind does not disclose the use of a filter in a claimed reactor system, while Licata discloses an RF filter with a DC power supply (Paper 2 at 3)—Petitioner omits one important fact. In the Licata-Kelly combination, Licata's DC power

DOCKET ALARM

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.