

Filed on behalf of: Kolon Industries, Inc.

Entered: July 28, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HS HYOSUNG ADVANCED MATERIALS CORP.,
Petitioner,
v.

KOLON INDUSTRIES, INC.,
Patent Owner.

Case IPR2025-00664
Patent 9,617,663

**PATENT OWNER'S REPLY TO PETITIONER'S
RESPONSE TO PATENT OWNER'S
REQUEST FOR DISCRETIONARY DENIAL OF INSTITUTION**

EXHIBIT LIST

Exhibit	Description
2001	U.S. Patent Application Publication No. 2014/0238524 A1 (“Love”)
2002	Civil Minutes – General, <i>Kolon Indus., Inc. v. HS Hyosung Advanced Materials Corp. et al.</i> , No. 8:24-cv-00415-JVS-JDE (C.D. Cal. Apr. 4, 2025), ECF No. 149
2003	Civil Minutes – General, <i>Kolon Indus., Inc. v. Hyosung Advanced Materials Corp. et al.</i> , No. 8:24-cv-00415-JVS-JDE (C.D. Cal. Aug. 21, 2024), ECF No. 68
2004	Proof of Service of Summons, Complaint, and related documents, <i>Kolon Indus., Inc. v. Hyosung Advanced Materials Corp. et al.</i> , No. 8:24-cv-00415-JVS-JDE (C.D. Cal. Mar. 5, 2024), ECF No. 15
2005	Hyosung Invalidation Trial Petition, dated Apr. 13, 2022 (original Korean document)
2006	Certified English translation of Hyosung Invalidation Trial Petition, dated Apr. 13, 2022
2007	RESERVED
2008	RESERVED
2009	Exhibit of Defendant Hyosung Advanced Materials Corp.’s Invalidity Contentions, <i>Kolon Indus., Inc. v. Hyosung Advanced Materials Corp. et al.</i> , No. 8:24-cv-00415-JVS-JDE (C.D. Cal. Mar. 17, 2025), ECF No. 146-7
2010	Patent L.R. 4-3 Joint Claim Construction and Prehearing Statement, <i>Kolon Indus., Inc. v. Hyosung Advanced Materials Corp., et al.</i> , No. 8:24-cv-00415-JVS-JDE (C.D. Cal. Feb. 20, 2025), ECF No. 133
2011	File History for U.S. Patent Application No. 16/464,350

Exhibit	Description
2012	RESERVED
2013	International Search Report for International Application No. PCT/KR2017/013279
2014	Letter from Kolon Industries, Inc. to Hyosung Advanced Materials, dated Feb. 4, 2021 (original Korean document)
2015	Certified English translation of Letter from Kolon Industries, Inc. to Hyosung Advanced Materials, dated Feb. 4, 2021 (certified English translation)
2016	U.S. Patent No. 6,886,320 (“Rowan”)
2017	Declaration of Dr. David Brookstein in Support of Patent Owner’s Preliminary Response (“Brookstein”)
2018	<i>Curriculum Vitae</i> of David Brookstein, Sc.D.
2019	The Textile Institute, <i>Advances in Yarn Spinning Technology: Woodhead Publishing Series in Textiles: Number 99</i> (C.A. Lawrence ed., 2010) (excerpt)
2020	B.C. Goswami, J.G. Martindale, F.L. Scardino, <i>Textile Yarns: Technology, Structure, and Applications</i> (1977) (excerpts)
2021	DuPont, <i>Kevlar® Aramid Fiber Technical Guide</i> (2017)
2022	C. Lechat et al., <i>Mechanical Behaviour of Polyethylene Terephthalate & Polyethylene Naphthalate Fibres Under Cyclic Loading</i> , 41 J. Materials Sci. 1745 (2006)
2023	Peter R. Lord, The Textile Institute, <i>Handbook of Yarn Production: Technology, Science & Economics</i> (2003) (excerpt)
2024	<i>Young’s Modulus</i> , https://depts.washington.edu/matseed/mse_resources/Webpage/Biomaterials/young's_modulus.htm (last visited July 7, 2025)

Exhibit	Description
2025	Louis H. Miner, <i>KEVLAR® 49 Aramid Fibers for High Performance Composites</i> , Soc'y Auto. Eng'rs, Inc., Passenger Car Meeting, Detroit, Mich. (Sept. 26–30, 1977)
2026	<i>HS Hyosung Advanced Materials Corp. v. Kolon Indus., Inc.</i> , IPR2025-00662 ('731 Patent), Paper 1 (Petition) (P.T.A.B. Feb. 28, 2025)
2027	Exhibit 1003 ([Corrected] Declaration of Jon Rust, Ph.D. in Support of Petition for Inter Partes Review of U.S. Patent No. 9,789,731) (Feb. 28, 2025), <i>HS Hyosung Advanced Materials Corp. v. Kolon Indus., Inc.</i> , IPR2025-00662
2028–2033	RESERVED
2034	U.S. Dep't of Transp., Nat'l Highway Traffic Safety Admin. (N.H.T.S.A.), <i>The Pneumatic Tire</i> (S. K. Clark et al. eds., Feb. 2006) (excerpt)

Patent Owner submits this authorized reply (Ex.3101) in support of its Brief on Discretionary Denial (“DDBrief,” Paper 7), addressing Petitioner’s arguments about the Korean High Court’s Judgment (Ex.1049)¹ regarding the Korean counterpart of Patent Owner’s U.S. Patent 9,789,731 (“’731 patent”). Pet’r’s Resp. to Pat. Owner’s Req. for Discretionary Denial (“Pet.Opp.,” Paper 9), 24. Petitioner’s arguments do not disturb the conclusion that the Director should exercise discretion to deny institution of *inter partes* review (“IPR”), finding that Patent Owner possesses strong settled expectations as to the ’663 patent’s validity.

The ’663 patent issued over eight years ago (Ex.1001), and although Patent Owner specifically notified Petitioner about this patent and its Korean counterpart² over four years ago (Ex.2015, 2 rows 10, 18), Petitioner never challenged the ’663 patent or any foreign counterpart before filing its Petition here. Petitioner admits that, after receiving Patent Owner’s notice letter in 2021, “Petitioner filed a challenge in 2022 against the Korean counterpart of Patent Owner’s ’731 patent.”

¹ Ex.1049 does not comply with 37 C.F.R. § 42.63(b) because Petitioner did not submit an affidavit attesting to the accuracy of the translation.

² The ’663 patent’s Korean counterpart, KR 1602605, issued from KR Application No. 10-2015-0092016, identified in Patent Owner’s notice letter (Ex.2015, 2 row 10) and on the face of the ’663 patent (Ex.1001, Cover (30)).

Pet.Opp. 24. Petitioner argues that its “successful challenge” to the Korean counterpart “to the ’731 patent shows a lack of settled expectations as to the validity of the ’663 patent.”³ *Id.* But the opposite is true.

Petitioner’s deliberate choice **not** to challenge the ’663 patent or any foreign counterpart and instead **only** to challenge the ’731 patent’s Korean counterpart reinforced Petitioner’s settled expectations as to the ’663 patent’s validity. Indeed, Petitioner knew of the ’663 patent and its Korean counterpart years before receiving Patent Owner’s 2021 notice letter that evidently prompted Petitioner to challenge the ’731 patent’s Korean counterpart. In March 2018, seven years before filing its Petition here, both the ’663 patent and its Korean counterpart were included in an international search report for one of Petitioner’s PCT applications. Ex.2013, 2.

Petitioner also concedes that it knew of the references Petitioner relies on in its Petition here—Tamura, Fritsch, and Rowan—back in 2022 because Petitioner relied on them in challenging the ’731 patent’s Korean counterpart. Pet.Opp. 24.

³ Petitioner’s success against the ’731 patent’s Korean counterpart before an intermediate Korean court under Korean law, which differs from U.S. law, does not bear on the validity of the ’731 patent—let alone the ’663 patent, whose claims have other requirements. If Petitioner expected success against the ’663 patent, it would have challenged the ’663 patent (or at least a foreign counterpart) long ago.

But Petitioner chose **not** to challenge the '663 patent or any foreign counterpart using these references until it filed its Petition here.

Thus, by the time Petitioner filed at the statutory deadline, Patent Owner had developed strong settled expectations in the '663 patent's validity because: (1) the '663 patent was about eight years old; (2) Petitioner learned of the '663 patent and its Korean counterpart at least about seven years ago; (3) Petitioner was specifically informed about them in Patent Owner's notice letter four years ago; and (4) Petitioner specifically chose not to challenge them, instead only challenging an unrelated patent three years ago based on the same prior art references that Petitioner asserts against the '663 patent here. *See iRhythm Techs., Inc. v. Welch Allyn, Inc.*, IPR2025-00363, -00374, -00376-78, Paper 10 at 3 (PTAB June 6, 2025) (denying institution because "Petitioner's awareness of Patent Owner's applications and failure to seek early review of the patents favors denial and outweighs [other] considerations"); *see also Amgen Inc. v. Bristol-Myers Squibb Co.*, IPR2025-00601, -00602, -00603, Paper 9 at 2-3 (PTAB July 24, 2025) (denying IPR institution of patents in force for "seven and six years ... creating strong settled expectations for Patent Owner").

Because Petitioner's calculated choice **not** to challenge the '663 patent or any foreign counterpart strengthens the settled expectations in its validity, and for the reasons set forth in Patent Owner's DDBrief, institution should be denied.

Respectfully submitted,

Dated: July 28, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on this 28th day of July, 2025, a true and correct copy of the foregoing **Patent Owner's Reply to Petitioner's Response to Patent Owner's Request for Discretionary Denial of Institution** was served by electronic mail on Petitioner's lead and backup counsel at the following email addresses:

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