

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SOLUS ADVANCED MATERIALS CO., LTD.,
Petitioner

v.

SK NEXILIS CO., LTD.,
Patent Owner

Case IPR2024-01463
U.S. Patent No. 11,591,706

PATENT OWNER'S OBJECTIONS TO EVIDENCE

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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Patent Owner SK nexilis Co., Ltd. (“Patent Owner”) objects under the Federal Rules of Evidence (F.R.E.) and 37 C.F.R. § 42.64(b)(1) to the admissibility of Exhibits 1002, 1003, 1017, 1018, 1021, 1022, 1025, 1026, 1030, 1032, 1035, 1036, 1039-1043, and 1045 (the “Challenged Evidence”), filed by Petitioner Solus Advanced Materials Co., Ltd. (“Petitioner”) on September 20, 2024, with the Petition. Patent Owner’s Objections are timely filed under 37 C.F.R. § 42.64(b)(1), within 10 business days of the April 25, 2025 Institution Decision. Patent Owner files these Objections to provide notice to Petitioner that Patent Owner may move to exclude the Challenged Evidence under 37 C.F.R. § 42.64(c).

I. IDENTIFICATION OF GROUNDS FOR OBJECTIONS

A. Exhibit 1003: Declaration of Dr. Michael Randall

Patent Owner objects to Exhibit 1003 under F.R.E. 702 and 703, because Exhibit 1003 includes statements and testimony from a witness who is not qualified as an expert.

Patent Owner further objects to Exhibit 1003, including at least paragraphs 14-38, 52-57, 63-171, and 174-218 as improper expert testimony under F.R.E. 702, 703 and 37 C.F.R. § 42.65. There has not been an adequate showing that this testimony is based on sufficient facts or data, is the product of reliable principles or methods, or that the testimony will help the Board understand the evidence or determine a fact in issue.

Patent Owner further objects to Exhibit 1003 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition. *See e.g.*, EX1003, ¶¶ 44-45, 107.

B. Exhibit 1017: ASME B46.1-2009

Patent Owner objects to Exhibit 1017 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition. Only page 21 of Exhibit 1017 is cited in the Petition.

Patent Owner further objects to Exhibit 1017 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1017 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

C. Exhibit 1018: Excerpts from ASME B46.1-2019

Patent Owner objects to Exhibit 1018 as being irrelevant under F.R.E. 401,

402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition. Only page 11 of Exhibit 1018 is cited in the Petition.

Patent Owner further objects to Exhibit 1018 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1018 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

D. Exhibit 1021: JIS B 0601 (1994)

Patent Owner objects to Exhibit 1021 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition. Only pages 13-15 of Exhibit 1021 are cited in the Petition.

Patent Owner further objects to Exhibit 1021 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the

document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1021 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

E. Exhibit 1022: JIS B 0601 (2001)

Patent Owner objects to Exhibit 1022 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition. Only pages 10, 14, and 24-25 of Exhibit 1022 are cited in the Petition.

Patent Owner further objects to Exhibit 1022 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1022 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay

for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

F. Exhibit 1025: John A. Marshall, “Measuring Copper Surface Roughness for High Speed Applications”

Patent Owner objects to Exhibit 1025 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition. Only page 2 of Exhibit 1025 is cited in the Petition.

Patent Owner further objects to Exhibit 1025 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1025 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

G. Exhibit 1026: Declaration of June Munford

Patent Owner objects to Exhibit 1026 under F.R.E. 702 and 703, because Exhibit 1026 includes statements and testimony from a witness who is not

qualified as an expert.

Patent Owner also objects to Exhibit 1026, including at least paragraphs 1-##16, as improper expert testimony under F.R.E. 702, 703 and 37 C.F.R. § 42.65. There has not been an adequate showing that this testimony is based on sufficient facts or data, is the product of reliable principles or methods, or that the testimony will help the Board understand the evidence or determine a fact in issue.

Patent Owner further objects to pages 23-25 of Exhibit 1026 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

H. Exhibit 1030: Young, H. (1962). Statistical treatment of experimental data. McGraw-Hill.

Patent Owner objects to Exhibit 1030 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1030 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the

document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1030 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

I. Exhibit 1032: Song et al., “Texture and temperature dependence on the mechanical characteristics of copper electrodeposits,” *Mat. Sci. and Eng. A*, 559 (2013) (“Song”)

Patent Owner objects to Exhibit 1032 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1032 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1032 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay

for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

J. Exhibit 1035: Harrington, G.F., Santiso, J. “Back-to-Basics tutorial: X-ray diffraction of thin films,” J Electroceram 47, 141–163 (2021)

Patent Owner objects to Exhibit 1035 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1035 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1035 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

K. Exhibit 1036: ASTM E8/E8M standard

Patent Owner objects to Exhibit 1036 as being irrelevant under F.R.E. 401,

402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1036 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1036 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

L. Exhibit 1039: Modern Electroplating, 3rd Ed., Ed. Lowenheim, J. Wiley and Sons, NY, 1974

Patent Owner objects to Exhibit 1039 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1039 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1039 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

M. Exhibit 1040: Rodgers, Professional Manual of Electroplating, University Publishing House, Utah, pp. 115-129

Patent Owner objects to Exhibit 1040 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1040 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1040 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

**N. Exhibit 1041: Screen capture of
www.textech.co.jp/en/products/foil-electrolytic (September 14,
2024)**

Patent Owner objects to Exhibit 1041 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1041 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1041 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

**O. Exhibit 1042: Screen capture of
www.denora.com/applications/copper-foilelectrodeposition.html
(September 14, 2024)**

Patent Owner objects to Exhibit 1042 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1042 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1042 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

P. Exhibit 1043: Huang, “Studies of Interfacial Adhesion and Copper Plating Chemistry for Metallization of Through-Package-Vias in Glass Interposers,” Thesis, Georgia Institute of Technology, December 2017

Patent Owner objects to Exhibit 1043 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1043 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1043 as impermissible hearsay under

F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

Q. Exhibit 1045: Vereecken et al., "The chemistry of additives in damascene copper plating," in IBM Journal of Research and Development, vol. 49, no. 1, pp. 3-18, Jan. 2005

Patent Owner objects to Exhibit 1045 as being irrelevant under F.R.E. 401, 402, and 403 at least to the extent it has not been relied upon in support of any argument made in the Petition.

Patent Owner further objects to Exhibit 1045 under F.R.E. 901 because Petitioner has not presented evidence sufficient to support a finding that the document in question is what Petitioner claims it to be. There is no evidence that the document is self-authenticating under F.R.E. 902.

Patent Owner further objects to Exhibit 1045 as impermissible hearsay under F.R.E. 801 and 802 to the extent to which the out of court statements therein are offered for the truth of the matters asserted and constitute impermissible hearsay for which Petitioner has not demonstrated any exception or exclusion to the rule against hearsay. Accordingly, permitting Petitioner to rely on this evidence would be misleading and unfairly prejudicial to Patent Owner (F.R.E. 403).

II. CONCLUSION

To the extent Petitioner fails to correct the defects associated with the Challenged Evidence in view of Patent Owner's objections herein, Patent Owner may file a motion to exclude the Challenged Evidence under 37 C.F.R. § 42.64(c).

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX PLLC

/Michael D. Specht/

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Registration No. 54,463
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Date: May 9, 2025

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

I certify that the above-captioned **PATENT OWNER'S OBJECTIONS TO EVIDENCE** was served in its entirety on May 9, 2025, upon the following parties via electronic mail:

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Respectfully submitted,

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Date: May 9, 2025

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