

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UBE MAXELL CO., LTD.
Petitioner

v.

LG CHEM, LTD.
Patent Owner

Case IPR2013-00471
Patent 7,695,870 B2

Before FRANCISCO C. PRATS, JACQUELINE WRIGHT BONILLA, and
SCOTT E. KAMHOLZ, *Administrative Patent Judges*.

PRATS, *Administrative Patent Judge*.

DECISION
Petitioner's Request for Rehearing
of Decision to Institute *Inter Partes* Review
37 C.F.R. § 42.71

I. INTRODUCTION

Ube Maxell Co., Ltd. (“Ube Maxell”) filed a corrected Petition August 9, 2013 (“Pet.”) requesting *inter partes* review of claims 1-19 of U.S. Patent No. 7,695,870 B2 (Ex. 1101, “the ’870 patent”). Paper 7. Patent Owner, LG Chem, Ltd., (“LG Chem”), filed a Preliminary Response, November 1, 2013 (“Prelim. Resp.”). Paper 20.

Thereafter, we instituted *inter partes* review of claims 1-6 and 8-19, but not claim 7, based on three grounds of unpatentability proposed by Ube Maxell. Paper 24 at 19 (“Decision to Institute”). In doing so, we declined to adopt the claim construction for claim 7 advanced by Ube Maxell. *Id.* at 10-11, 18.

Ube Maxell requests rehearing of our Decision “not instituting on Grounds 1 and 3 in their entirety as cumulative, and on Ground 8 for claim 7.” Paper 26, 1 (“Req. Reh’g”). More specifically, Ube Maxell “asks that the Panel (1) reconsider its claim construction of claim 7, and (2) find that the Petition convincingly addressed the peel strength recitation of claim 7 in each of *non-cumulative* Grounds 1, 3 and 8.” *Id.*

We have reconsidered our Decision to Institute in light of Ube Maxell’s points, but decline to modify that Decision.

II. STANDARD OF REVIEW

When rehearing a decision on a petition to institute an *inter partes* review, the Board “will review the decision for an abuse of discretion.” 37 C.F.R. § 42.71(c). The party requesting rehearing has the burden of showing the decision should be modified, and “[t]he request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each

matter was previously addressed in a motion, an opposition, or a reply.” 37 C.F.R. § 42.71(d).

III. ANALYSIS

A. Claim Construction of Claim 7

Claim 7 of the '870 patent recites “[t]he organic/inorganic composite separator according to claim 1, wherein the porous coating layer has a peeling force of 5 gf/cm or above.” Ex. 1101, 12:5-8.

In the Petition, Ube Maxell argued that the peeling force limitation of claim 7 would be met inherently by any combination of ingredients meeting the requirements of claim 1, because the conditions for determining peeling force had not been adequately defined in the '870 patent, as evidenced by a number of cited references, as well as the Iezzi Declaration. See Pet. 9-12.

On rehearing, Ube Maxell urges that it had additionally argued in its Petition that, during prosecution, the Examiner had, consistent with Ube Maxell's proposed construction, interpreted the peeling force requirement of claim 7 to be inherently met by any composition meeting the requirements of claim 1. Req. Reh'g 1-2; Pet. 11. Ube Maxell argues also, based on a declaration under 37 C.F.R. § 1.132 submitted during prosecution, as well as peel strength data for the composition of Comparative Example 2 of the '870 patent, “that an organic/inorganic composite separator, when it is prepared and measured, *necessarily* falls within the range of claim 7.” Req. Reh'g 3-7 (quotation at 6). Ube Maxell argues further, based on the same declaration and peel strength data for the comparative examples, that claim 7 is ambiguous, and, therefore, “in construing claim 7, the peeling force limitation is [an] inherent feature obtained from the organic-inorganic composite layers that satisfy the requirements of claim 1.” *Id.* at 7.

We are not persuaded. As explained in the Decision to Institute, we declined to adopt Ube Maxell's proposed construction of claim 7 because the Specification of the '870 patent expressly defines peeling force, and explains how it is to be determined. Decision to Institute 11-12. Thus, while Ube Maxell's arguments express disagreement with our Decision, we are not persuaded that Ube Maxell has shown that we misapprehended or overlooked Ube Maxell's position regarding the claim construction of claim 7, or any evidence advanced on that issue. Moreover, other than the Examiner's claim interpretation, Ube Maxell does not identify the place in the Petition where Ube Maxell made the specific arguments regarding the declaration under 37 C.F.R. § 1.132, the prosecution history, and comparative examples, now argued on rehearing. See 37 C.F.R. § 42.71(d); Req. Reh'g 1-7; Pet. 10-12.

B. Request for Rehearing of Ground 1

In Ground 1, Ube Maxell urged that claims 1-10 and 13-19 were anticipated by, or obvious over, Miyamoto,¹ as evidenced by, or in view of, a number of additional references. Pet. 12.

The Decision to Institute concluded that Ground 1 was redundant to the grounds for which review was instituted. Decision to Institute 18. As to claim 7, Ube Maxell "either relies on the claim construction we decline to adopt, or makes no specific mention of the peel strength requirements of claim 7." *Id.* The Decision further explained that "[i]n either event, we are not persuaded that Ube Maxell establishes adequately how the cited references disclose or suggest a separator with a porous coating layer having the peel strength required by claim 7." *Id.* (citation omitted).

¹ JP A 11-213979 (published August 6, 1999) (as translated) (Ex. 1103).

On rehearing, Ube Maxell argues that Miyamoto satisfies the peeling force requirement of claim 7 because the reference discloses, in Example 9, a composition having an “adhesive strength” of “58g/2cm” which “is equal to 29gf/cm.” Req. Reh’g 8. Ube Maxell does not, however, identify the place in the Petition where it made this specific argument, or directed us to this disclosure. Nor does Ube Maxell identify any discussion in the Petition explaining why Miyamoto’s adhesive strength values would correspond to the values obtained using the peeling force test required by the ’870 patent. We are, therefore, not persuaded that our Decision misapprehended or overlooked this contention.

Ube Maxell also argues that it cited Hyun-Joong Kim² as having a peeling strength profile up to about 1700gf/cm, and that therefore, “[i]t is reasonable to conclude that *Miyamoto*’s separator including an acrylic PSA, that is, the ‘butyl acrylate/acrylic acid (97/3)’ copolymer of *Hyun-Joong Kim*, necessarily falls within the peeling force of about 5gf/cm or above, and ‘up to about 1700gf/cm.’” Req. Reh’g 10.

We acknowledge the citation of Hyun-Joong Kim in the Petition, in relation to Ground 1. Pet. 22. We are not persuaded, however, that Ube Maxell adequately explained in the Petition whether Hyun-Joong Kim was cited as evidence of inherency or obviousness. Nor are we persuaded that Ube Maxell advanced, in the Petition, the argument it now advances regarding Hyun-Joong Kim, such that we misapprehended or overlooked it.

Specifically, the section in the Petition discussing claim 7 in relation to

² Hyun-Joong Kim and Hiroshi Mizumachi, *Miscibility and Peel Strength of Acrylic Pressure-Sensitive Adhesives: Acrylic Copolymer-Tackifier Resin Systems*, Journal of Applied Polymer Science, Vol. 56, 201-209 (John Wiley & Sons, Inc. 1995) (Ex. 1106).

Ground 1 appears under the heading “Obviousness over *Miyamoto*.” Pet. 20. In discussing claim 7, however, the Petition initially states that “*Miyamoto* satisfies claim 1. By Claim Construction E above, the acrylic PSA [pressure sensitive adhesive] of *Miyamoto* inherently satisfies claim 7.” *Id.* The Petition then states that Hyun-Joong Kim “suggests attaining a peeling strength of up to about 1700gf/cm when using an acrylic PSAs including Copolymer Code No. 1 in Table 1, i.e., butyl acrylate/acrylic acid (97/3).” *Id.* Therefore, the Petition concludes, “the peel strength by using the acrylic PSA of *Miyamoto* satisfies claim 7 of the ’870 patent.” *Id.*

We are not persuaded that the Petition explained, with adequate specificity, whether Hyun-Joong Kim was cited to demonstrate inherent anticipation of claim 7 by *Miyamoto*, or whether Hyun-Joong Kim was cited as evidence that claim 7 would have been obvious in view of the combination of the two references. The Petition did not provide a clear or specific rationale explaining how Hyun-Joong Kim was to be combined with *Miyamoto*, nor why features of Hyun-Joong Kim’s copolymer necessarily dictated features of a different composition disclosed in *Miyamoto*. Thus, we are not persuaded that we misapprehended or overlooked any point Ube Maxell made as to why the peeling force required by claim 7 was inherently described by, or obvious over, *Miyamoto*, particularly in light of the conceded differences between the adhesive compositions in Hyun-Joong Kim and *Miyamoto*. See Req. Reh’g 9. Moreover, while Ube Maxell urges that Ground 1 is not cumulative to the grounds on which we instituted review, Req. Reh’g 1, Ube Maxell does not identify any argument to that effect in the Petition, such that we may have misapprehended or overlooked it.

C. Request for Rehearing of Ground 3

In Ground 3, Ube Maxell urged that claims 1-19 were obvious over WO '428 Lee,³ in view of a number of additional references. Pet. 30.

In the Request for Rehearing, Ube Maxell restates the rationale advanced in the Petition, and notes that that discussion included an assertion that the results shown in Figure 5 of the '870 patent “were readily predictable from the well-known success in improving the adhesion strength in the electrodes for lithium ion secondary batteries.” Req. Reh’g 12 (citing Pet. 39:10-12). Thus, Ube Maxell argues, Figure 5 “discloses a peeling force of ‘5gf/cm or above,’ that is, the invention of claim 7.” *Id.*

Although we acknowledge the Petition’s reference to Figure 5 of the '870 patent when discussing Ground 3, *see* Pet. 39, we are not persuaded Ube Maxell has identified in that discussion any clear or specific reference to claim 7 or its specific peeling force requirement, or any clear or specific argument urging that the disclosure in Figure 5 rendered claim 7 obvious. We are, therefore, not persuaded that we misapprehended or overlooked any clear or specific point Ube Maxell made in that regard. Moreover, while Ube Maxell urges that Ground 3 is not cumulative to the grounds on which we instituted review, Req. Reh’g 1, Ube Maxell does not identify any argument to that effect in the Petition, such that we may have misapprehended or overlooked it.

D. Request for Rehearing of Ground 8 on claim 7

In Ground 8, Ube Maxell urged that claims 1-10 and 13-19 were anticipated by, or obvious over, Nagasaki,⁴ as evidenced by, or in view of, a number of

³ WO 2006/068428 A1 (published Jun. 29, 2006) (Ex. 1108).

⁴ WO 2005/104273 A1 (published Nov. 3, 2005) (Ex. 1131); Ube Maxell cites to the English equivalent, U.S. Patent Pub. No. 2007/0218362 A1 (filed Apr. 22,

additional references. Pet. 54. In declining to institute review of claim 7 based on Ground 8, we stated that “Ube Maxell has not directed us reasonably to evidence suggesting that an ordinary artisan had a reason to prepare a separator having the recited peeling force, or a reasonable expectation in preparing or modifying Nagasaki’s porous film such that it would meet the peeling force requirement of claim 7.” Decision to Institute 16.

Ube Maxell first contends that, because we found that Nagasaki anticipates or renders claim 1 obvious, Nagasaki, therefore, “inherently satisfies claim 7.” Req. Reh’g 13. As noted above, however, our Decision expressly rejected a claim construction, proposed by Ube Maxell, that “peeling force of 5 gf/cm or above” as recited in claim 7 is necessarily “a feature of the organic-inorganic composite layers that satisfy the requirements other than the peeling force in claim 1 on which claim 7 depends.” Decision to Institute 10-11 (citing Pet. 12, Ex. 1140 ¶ 14).

Ube Maxell argues also that, based on the comparative examples of the ’870 patent, as well as the previously mentioned § 1.132 declaration, “it is inferred that the peeling force of the *Nagasaki*[] organic/inorganic composite separator using [the polymer] BM-500B is 5gf/cm or above, thus satisfying claim 7.” Req. Reh’g 14. Moreover, Ube Maxell argues, Hyun-Joong Kim provides evidence that a pressure sensitive adhesive composed of the monomer units of the BM-500B polymer attains a peeling force of up to about 1700gf/cm, thus meeting the requirement of claim 7. *Id.* Lastly, Ube Maxell argues, in Ground 8 the Petition addressed the fact that a separator using BM-500B as a binder polymer would have “peeling force better than including a PVDF unit as disclosed in *WO’428Lee*” and thus addressed the obviousness of claim 7. *Id.* at 14-15.

2005) (Ex. 1117), as do we. See Pet. 54.

We are not persuaded, however, that Ube Maxell has adequately identified the particular place in the Petition where it made the specific arguments regarding the declaration under 37 C.F.R. § 1.132, the comparative examples, and the disclosure of Hyun-Joong Kim, now argued on rehearing. Also, while we acknowledge the Petition's inclusion of claim 7 in the listing of claims asserted as being anticipated and obvious, Pet. 54-56, as well as the alternative obviousness rationale, *id.* at 55-56, we are not persuaded that Ube Maxell has adequately identified the place in the Petition where it specifically addressed claim 7, and its required peeling force of 5 gf/cm or above, in relation to Ground 8. Accordingly, we are not persuaded that we misapprehended or overlooked any clear or specific arguments Ube Maxell made in Ground 8 as to the anticipation or obviousness of claim 7.

IV. CONCLUSION

Having carefully considered Ube Maxell's Request for Rehearing, we are not persuaded, for the reasons discussed, that our decision not to institute as to claim 7, or as to Grounds 1 and 3, misapprehended or overlooked any argument that Ube Maxell advanced in that regard. Nor are we persuaded that we misapprehended or overlooked any argument Ube Maxell advanced as to the claim construction of claim 7.

V. ORDER

ORDERED, that for the reasons given, Ube Maxell's request for rehearing is *denied*.

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