

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FLSMIDTH INC.,
Petitioner,

v.

METSO OUTOTEC (FINLAND) OY,
Patent Owner.

IPR2025-00985
Patent No. 9,518,604

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

Patent Owner Metso Finland Oy (“Metso” or “Patent Owner”) submits this Preliminary Response to the Petition for *inter partes* review of U.S. Patent No. 9,518,604 (“the ’604 patent”). Institution should be denied because Petitioner identifies no prior art combination teaching the claimed structure—a “fluid bearing” having a “polymer bearing pad” securely mounted to a base with a mounting element or other fastening system.

The ’604 patent introduced polymer bearing pads, and a corresponding mounting structure to secure them in place, in large grinding-mill bearings. Prior designs relied on metallic linings spray-welded or cast onto a steel base. None used the claimed polymer pads properly mounted to a base. Employing polymer in this context was a fundamental departure from the state of the art. And given the extreme demands on grinding-mill bearings, the patent discloses and claims structure to securely mount the polymer pad to the base. That mounting structure is not incidental—it goes to what makes the use of polymer viable in this application.

Petitioner, however, tosses together references from disparate contexts in a way that leaves one to sort out the specific obviousness theories. For example, in Ground 1, the Petition relies on *GB384* for the claimed “mounting element” in claim 1, but then abruptly pivots to *DE364* for that same mounting element in claim 3—without ever explaining how the alleged teachings of that other reference would

result in an allegedly obvious modification. The Petition does this repeatedly, leaving Patent Owner (and potentially the Board) to sort out how one could allegedly combine the art to meet the subject matter of the claim as a whole.

As detailed below, the Petition thus fails to show a reasonable likelihood of success on any challenged claim. Institution should be denied.

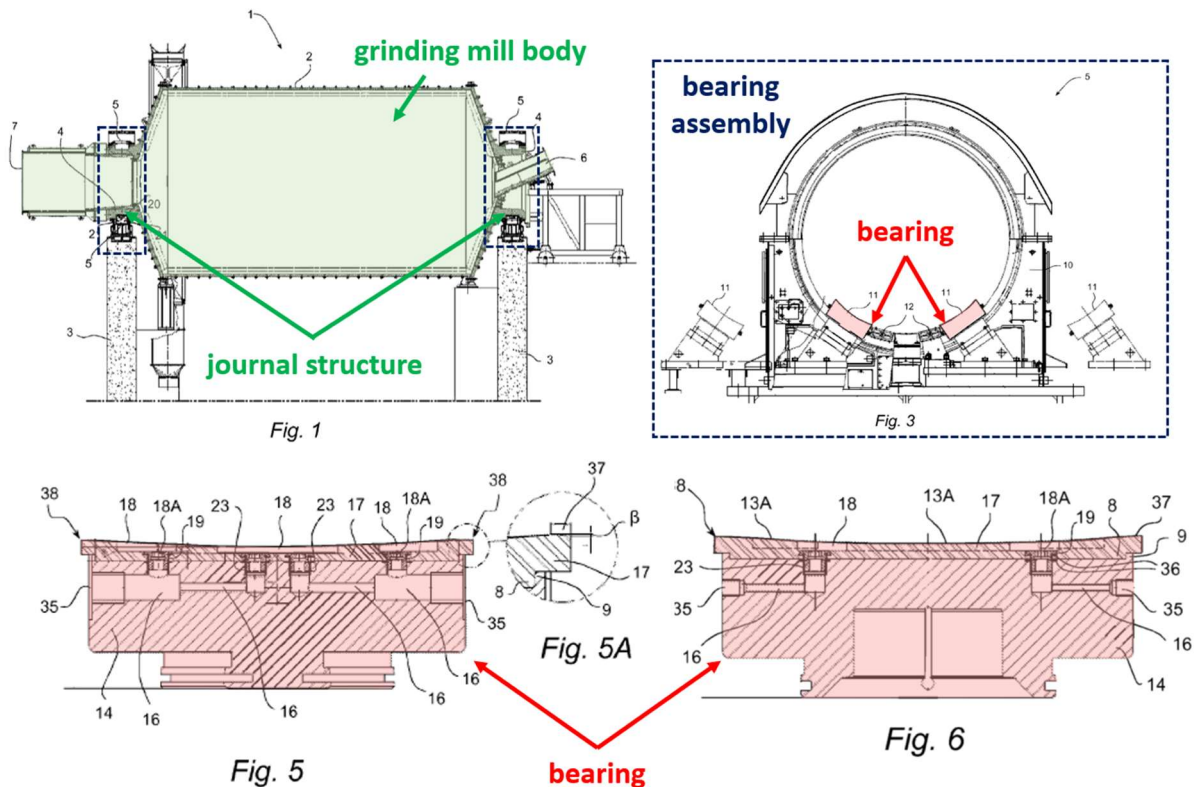
II. THE '604 PATENT

The '604 patent discloses bearing assemblies “developed primarily for use as a hydrostatic polymeric bearing in grinding mills.” Ex. 1001 at 1:37-41; *see also id.* at 9:28-39, Figs. 1-3. Such bearings support the mill journal by floating it on a layer of pressurized oil. In conventional mill assemblies, the bearings used metallic linings (e.g., bronze or white metal) spray-welded or cast onto the base. *Id.* at 2:35-52. These were prone to wear, required refurbishment of the base when replaced, and were vulnerable to catastrophic damage if the oil film was disrupted. *Id.*

To address these shortcomings, the '604 patent discloses bearing assemblies having polymer pads securely mounted to a base with mounting elements or other structures. *See, e.g., id.* at 9:54-10:2, 11:25-30. These pads also include recesses to receive lubricating fluid from passages in the base and to distribute that fluid across the pad's surface interfacing with the journal. *Id.* at 10:3-11, 10:19-35, 10:59-11:14.

The newly designed polymer bearings improve tolerance to misalignment and oil-film interruptions and reduce the need for pressure accumulators. *Id.* at 1:65-2:13,

12:32-13:39 (discussing advantages over metal pads). They also maintain the oil film between the journal and the bearing pad more effectively. *Id.* at 2:2-13. Figures 1, 3, 5, and 6 illustrate one embodiment. *Id.* at Figs. 1, 3, 5-6, 10:12-18.



A central aspect of the disclosure is the mounting features that fix the polymer pads to the base. For example, “the mounting portion 8 of the polymer pad 17 engages the flanges 9 of the base 14 to help lock the polymer pad in place.” *Id.* at 11:15-17. The patent emphasizes that this “ensures that frictional loads generated during the rotation of the journal 4 do not forcibly remove or ‘wipe’ the polymer pad 17 from the base 14.” *Id.* at 11:17-22. The patent thus describes multiple structures for securely mounting a polymer pad to the base, including:

- Flanges 9: Such as those at the outer edges or sides of base 14. *Id.* at 9:54-10:2, 11:15-22, Figs. 5-6, 9, 13.
- Mounting Portion 8: Such as a protrusion on the pad's mounting surface opposite outer surface 13A to engage flanges and "help lock the polymer pad in place." *Id.*
- Fastening Systems: Including fasteners (e.g., 23, 30) received in openings 18A of recess 18, locking tab 28, and tapered head portions 26, 31 to "facilitate retention" and secure engagement with the base. *Id.* at 11:4-14, 11:40-53, Figs. 11-12.
- Pressure Differences: Formed during operation that, "together" with the above structures, help "hold" the polymer pad in place. *Id.* at 11:26-39.
- Plug 32: To "prevent" fasteners from "becoming loose." *Id.* at 11:48-55.

Again, these mounting features ensure the polymer pads remain securely in place under the heavy loads of a grinding mill. *Id.* at 9:54-10:2, 12:15-32; *see also id.* at 11:4-39 (ensuring "frictional loads generated during the rotation of the journal 4 do not forcibly remove or 'wipe' the polymer pad 17 from the base 14. . . .").

III. CLAIM CONSTRUCTION

Petitioner argues that "mounting element" and "locking element" are subject to 35 U.S.C. §112(f).¹ Pet. at 12. For purposes of this Preliminary Response, no

¹ Although Petitioner cites § 112(f), the correct statute is pre-AIA § 112, ¶ 6, as the '604 patent claims priority to an Australian application filed June 28, 2012.

express construction is necessary. Denial of institution is appropriate because, even under Petitioner's construction,² the asserted art fails to disclose the claimed features. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019). Patent Owner reserves the right to address claim construction fully should trial be instituted.

IV. PERSON OF ORDINARY SKILL IN THE ART (POSITA)

For purposes of this Preliminary Response, Patent Owner does not contest Petitioner's proposed definition of a person of ordinary skill in the art. *See* Pet. at 11-12. Patent Owner reserves the right to address or contest that definition should this challenge be instituted.

V. THE ALLEGED PRIOR ART

A. Primary References (Non-Polymer Bearing Assemblies)

The Petition relies on *GB384* (Grounds 1-4), the '*133 Patent* (Ground 5), and the *Metso Brochure* (Ground 6) as primary references. Pet. at 3. Each, according to the Petition, discloses a non-polymer bearing assembly.

GB384 is a 1976 publication describing a bearing for supporting a rotating

² Petitioner's construction ignores the prosecution history, where the Examiner identified corresponding structures of the then-claimed "mounting means": (1) "a mounting portion extending from said polymer bearing pad," and (2) "at least one opening for receiving at least one fastener." Ex. 1002 at 44.

body and “taking up axial stresses.” Ex. 1003 at 1:9-18. To limit rotating body 12 moving axially past shoe 10, the body 12 has protrusions 14 that extend on each side of shoe 10. *Id.* at 2:64-68, Fig. 3. A single passage describes shoe 10 as having an anti-friction “lining” 16 on the shoe’s sides and upper surface. *Id.* at 2:69-74. The underlying shoe also has recesses 18, 19, 22 for oil to lubricate shoe 10. *Id.* at 2:114-18. Recess 18 is thus for oil, not any mounting of surface lining 16.

The *'133 Patent*, also from 1976, discloses a fluidic bearing assembly that allows the direction of the supported shaft to be reversed. Ex. 1007 at 1:5-13. Similar to *GB384*, the *'133 Patent* discloses a “lining” 16-18 carried on main shoe 10 and auxiliary shoes 11, 12. *Id.* at 2:31-45; *see also* Fig. 1 (showing “lining” 16 disposed on shoes 10-12), Fig. 4 (showing unitary “lining” 40 disposed on shoes 41-43).

The *Metso Brochure* is a marketing publication from Metso Minerals Industries that provides an overview of mill design and operation. Ex. 1006 at 5.

B. Secondary References (Polymer Disclosures in Other Fields)

Petitioner relies on either *DE364* (Grounds 1-5)³ or the *'993 Publication* (Ground 6) in an attempt to cure the defects of the applicable primary reference. Pet. at 3. Both, however, arise from entirely different industries. Neither suggests a way

³ *DE364*’s original assignee was “Metso Paper, Inc.,” an entity focused on the paper business, spun-off from Patent Owner in 2013, and now named Valmet Oyj.

to use polymer pads in the way claimed.

DE364 concerns a relatively small “nip press” for handling “paper or cardboard,” such as in the “calendering process.” Ex. 1005 at [0001], [0003], [0022], [0024]. This type of “nip press” has a “belt” or “elastic hose-like shell” 10 that rotates over a bearing shoe 5. *Id.* at [0022]; *see also* Figs. 1-2. Because the belt and shoe can experience “damage,” *DE364* discloses replacing only the damaged part of the shoe. *Id.* at [0003], [0010]. Shoe 5 thus has a “wear part” 30 that is “replaceable.” *Id.* at [0024]; *see also* Figs. 3-4. Petitioner relies on *DE364*’s disclosure that lists plastic as a material for this “wear part” 30. *Id.* at [0011]. *DE364* explains that this wear part is specifically intended for such machines. *Id.* at [0001].

The ‘993 *Publication* is directed to bearings used in wind turbines that undergo frequent start-up and shut-down cycles. Ex. 1013 at [0004], [0011]-[0012]. Petitioner relies on the reference’s general mention of “polymers.” The reference explains that bearing pads 2 themselves are made of metal, with cavities for fluid injection extending into the pad itself. *Id.* at [0029]. In one embodiment, a “lining” 50 on the pad’s top surface is described as polymer. *Id.* at [0059].

C. Other References (Applied to Dependent Claims)

In an effort to challenge certain dependent claims, the Petition also applies the ‘799 *Patent* (Ground 2), the ‘551 *Patent* (Ground 3), and *Trygg* (Ground 4) in combination with the art relied on in Ground 1. Pet. at 3. As explained further below,

none of these additional references remedy the deficiencies in Ground 1.

VI. THE PETITION FAILS TO ESTABLISH A REASONABLE LIKELIHOOD OF UNPATENTABILITY

The burden of proving unpatentability rests with—and is borne at all times by—Petitioner. 35 U.S.C. §§ 314(a), 316(e); *see In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016). Petitioner must “articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness,” and “mere conclusory statements” do not suffice. *Id.* at 1380.

Petitioner has not met that burden. Its grounds conflate disparate features across references, ignore critical structural distinctions, and substitute conclusory “general knowledge” for the required disclosure or articulated rationale. It also relies on non-analogous art from different industries and operating environments, treating those disclosures as interchangeable. Such hindsight-driven combinations fall well short of what the law requires. More fundamentally, the Petition fails to articulate the proposed modifications or explain how the art is combined.

As explained below, none of Petitioner’s grounds shows that the asserted references disclose or suggest the claimed polymer bearing pads and required structural features, or otherwise bridge the fundamental differences between the art

and the claims.⁴ Accordingly, the Board should deny institution.

A. The Petition Fails to Articulate the Proposed Modifications or How the Art Is Allegedly Combined

A petition must identify “with particularity” the evidence supporting each ground and claim. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016); 35 U.S.C § 312(a)(3). And “the Board should not have to decode a petition to locate additional arguments.” *Netflix, Inc. v. DivX, LLC*, 84 F.4th 1371, 1377-78 (Fed. Cir. 2023).

Indeed, a bare assertion that another reference teaches a singular claim element is not an articulated modification to a ground’s primary reference. *See Heart Failure Techs., LLC v. Cardiokinetix, Inc.*, IPR2013-00183, Paper 12 at 9 (PTAB July 31, 2013) (explaining a petition must explain “how the teachings of the references would be arranged or combined or why a person of ordinary skill would have made the combination” and provide “some reason” why a POSITA would have thought to combine the identified art “to reach the claimed invention”); *Delta Elect. Inc. v. Vicor Corp.*, IPR2024-00187, Paper 10 at 35-36 (denying institution and

⁴ Should this IPR continue, Patent Owner will challenge the alleged motivation to modify GB384, the ‘133 Patent, and/or the Metso Brochure to instead use a polymer material for the claimed bearing pad (e.g., as allegedly taught by DE364).

stating “Nor does Petitioner provide any explanation as to how [the references] would be combined. ... it is unclear from the Petition why and in what way [the references] are being combined, and the Petition leaves the Board guessing what modifications Petitioner proposes.”).

This is not a minor pleading defect; it is a fundamental legal failure. The Board should not fill gaps or make a petitioner’s case for it. *See Magnum Oil Tools*, 829 F.3d at 1380-81 (petitioner must “articulate specific reasoning, based on evidence of record”; “mere conclusory statements” are insufficient).

Here, the Petition fails to coherently articulate what modifications to the primary reference it actually proposes. Ground 1 illustrates the problem. For claim 1, the Petition relies only on *GB384*’s alleged disclosure of a “mounting element” by pointing to the upper surface of the underlying shoe. Pet. at 37 (stating *GB384* discloses “shoe 10 has a surface (i.e., mounting element)” and including an annotated drawing figure pointing to the alleged “mounting portion” [sic]). But, then, for claim 3—which directly depends from claim 1 and which further defines this same “mounting element”—the Petition abruptly pivots to *DE364*, relying on that reference’s disclosure of the claimed “opening,” “fastener,” and “bore.” Pet. at 39-41. The Petition also relies on, for dependent claim 3, Petitioner’s expert Smith for alleged knowledge about a “locking tab” as claimed. Nowhere, however, does the Petition explain how these components would be integrated into *GB384*’s bearing or

any other bearing having the features that *GB384* allegedly discloses.

For example, if a “fastener” of *DE364* and an unspecified “locking tab” are allegedly used in the bearing of *GB384*, then where would those parts be installed? Would the supposedly modified bearing still operate? And what is the motivation for making such modifications to *GB384*’s specific bearing? The Petition fails to explain any obviousness theory with sufficient information to answer these questions.

The Petition essentially repeats this defect throughout—for example, in its analysis of claim 4 (where Petitioner points to an “opening” and “fastener” in *DE364* without ever explaining how these would (or could) be used in a presumably modified *GB384* bearing), claim 10 (where Petitioner points to *DE364*’s “removably mounted” pad without explaining how this would (or could) be incorporated into *GB384*), claim 13 (same defect as claim 3), claim 14 (same defect as claim 4), and claim 21 (same defect as claim 4) in Ground 1. Pet. at 41-42, 44, 47. These defects extend to Grounds 2-4 on the dependent claims. And similar defects occur in the Petition’s analysis of claims 3, 4, 10, 13, 14, and 20 in Ground 5. *See id.* at 69-73. These defects also occur in Ground 6. *Id.* at 75-76 (where Petitioner points to the ’993 *Publication* for alleged disclosure of plural bearings without ever explaining how any assembly of the *Metso Brochure* would (or could) be modified to include plural bearings).

In each instance, the Petition asserts that another reference teaches a singular

claim element—even though it relies on a different reference for the relevant structure—without ever articulating how the cited prior art would result in the subject matter of the respective claim as a whole. This is wholly improper. It leaves at least Patent Owner without any proper understanding of Petitioner’s obviousness allegations. These examples thus illustrate the broader defect: Petitioner never advances a coherent modification path explaining how a POSITA would combine the art to yield a bearing structure allegedly falling within the challenged claim’s scope.

At institution, the burden remains on Petitioner to advance a clear theory, not on the Board to infer or reconstruct missing steps. *See Magnum Oil Tools*, 829 F.3d at 1380-81; *Netflix*, 84 F.4th at 1379-80. Because Petitioner has not met its burden—and the Board need not decode or reconstruct missing theories—the Petition fails to show a reasonable likelihood of success. Institution should be denied.

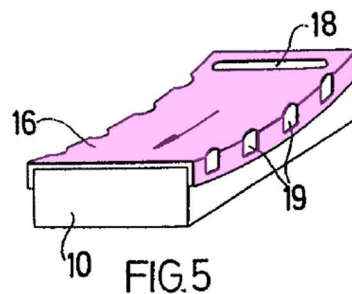
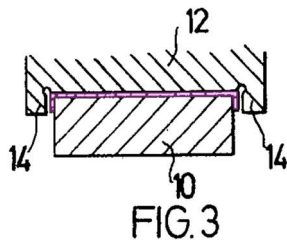
B. Ground 1: The Challenged Claims are Not Obvious Over *GB384* and *DE364*

Petitioner relies on *GB384* as the primary reference in Ground 1, including its disclosure of a “lining 16” for the claimed bearing pad. To meet the claimed “polymer” requirement, Petitioner presumably relies on *DE364* for an alleged substitution of a different material for lining 16 of *GB384*. Pet. at 34-36, 50.

With respect to claims 1 and 11, Petitioner also alleges that *GB384* discloses the “mounting element” limitation. Pet. at 37 (stating “upper surface of the shoe 10

has a surface (i.e., a mounting element). . . .”); *id.* at 44 (“same reasons” apply to claim 11). Petitioner thus relies on this “surface” of shoe 10 for the “mounting element” recited in both claims 1 and 11.

That allegation is erroneous. Patent Owner agrees that *GB384* discloses each shoe’s “upper face” and side portion is “covered with a lining 16.” *Id.* at 2:69-74. However, *GB384* does not disclose any structure for mounting this lining 16 to the underlying shoe. The lining could, for instance, be simply disposed on the shoe’s top surface without any separate mounting structure. *See also* Figs. 3 and 5 (annotated below) (demonstrating an absence of any disclosed mounting structure).



Regardless, Petitioner erroneously equates the shoe’s surface with the claimed “mounting element.” Pet. at 37 (expressly relying on this “surface”). The “mounting element” is a separately claimed structural element that mounts the pad to the base. In *GB384*, the relied-upon “surface,” even oil channel 18 in that surface, is simply part of shoe 10 itself (which Petitioner alleges is the claimed “base”). Pet. at 36; Ex. 1003 at 2:79-82 (explaining channel 18 is for oil, not any mounting). Thus, this surface is not (and cannot correspond to) the claimed “mounting element.” No part of

GB384 explains any part of this surface even helps securely mount lining 16, let alone if a polymer lining were used. The Petition is simply nonsensical here. This is true even under Petitioner’s own §112(f) construction of “mounting element,” because the shoe’s top surface cannot itself be a separate mounting structure.

For claim 21, the Petition incoherently cites multiple distinct disclosures without articulating a specific modification or how these disclosures are combined. To illustrate, for the limitations directed to the “fluid bearing,” the “base,” and “fluid supply ports,” the Petition relies on *GB384*. Pet. at 45-46. The same appears true for the “bearing pad” limitations. *Id.* at 46. But for the limitation requiring a “fastener” for mounting the pad to the base, the Petition switches to *DE364*’s disclosure of a fastener 17. Pet. at 47. Then, for the other limitations requiring a “locking tab for retaining a head portion . . . being tapered”—which concern this same fastener—the Petition switches again to alleging that such locking tabs and tapered head portions “are within the general knowledge of [a] POSITA.” *Id.* at 47-48. And if this were not confusing enough, the Petition also relies on its expert Smith for the claimed “bore” of this same fastener. *Id.* at 48 (citing Smith ¶ 101).

The problem here is that at no point does the Petition articulate how (or why) these distinct teachings would be integrated into any modified bearing (e.g., a modified version of *GB384*’s bearing) in a way that satisfies claim 21 as a whole. Nothing in Section VIII.B of this Petition supplies the missing articulation. Pet. at

49-51. At best, that section addresses the use of polymer as a bearing pad, with other portions referring generally to a POSITA's knowledge about "wear parts" and "locking elements." *Id.*

As noted above (*supra*, Section VI.A), this defect applies to other claims under Ground 1. For example, the Petition's section on dependent claim 3 relies on *DE364* for the claimed "mounting element" limitations, despite the Petition relying on *GB384* in claim 1 for this "mounting element." Again, the Petition never articulates what particular modifications to *GB384* these alleged teachings of *DE364* would cause a POSITA to make. The same is true for at least claims 4, 10, 13, 14, and 20.

At bottom, no proper combination of the cited references suggest the claimed structure. As to all the dependent claims subject to Ground 1, they distinguish the prior art for at least the reasons given above for claims 1, 11, and 21. Ground 1 is thus defective, such that institution should be denied.

C. Grounds 2-4: The Challenged Claims Are Not Obvious Over *GB384* and *DE364* in Further View of the Tertiary References

Grounds 2-4 suffer from at least the same flaws as Ground 1. These grounds address certain dependent claims, and none of the additional references supplies the missing "polymer pad" or "mounting element" limitations, or otherwise cures the defects identified for Ground 1. For example, Petitioner relies on the '799 *Patent* in Ground 2 for allegedly disclosing a "chamfer ... for retaining lubricating fluid," on

the *'551 Patent* in Ground 3 for allegedly disclosing a “lateral connecting portion” in bearing pads to form a “uniform bearing surface,” and on *Trygg* in Ground 4 for allegedly disclosing certain fluid distribution features. Pet. at 51-63. Again, none of these references cure the defects discussed above for Ground 1. Accordingly, Grounds 2-4 are defective for at least the reasons given above for Ground 1.

D. Ground 5: The Challenged Claims Are Not Obvious Over the *'133 Patent* and *DE364*

Petitioner relies on the *'133 Patent* as the primary reference and again turns to *DE364* for the claimed polymer features. Pet. at 64-74. The combination fails.

Petitioner begins by characterizing the *'133 Patent* as disclosing “bearings 10 . . . of a grinding mill body.” Pet. at 64. That is incorrect. The *'133 Patent* never mentions grinding mills. Independent claims 1 and 11, by contrast, expressly concern fluid bearings that support a “journal of a grinding mill.”

The *'133 Patent* also fails to disclose the “mounting element” recited in claims 1 and 11. For both, Petitioner alleges that the *'133 Patent* has a “mounting portion” [sic] because the reference’s Fig. 4 shows, according to Petitioner, a “liner 40 disposed within a corner of groove 46 which limits movement of the liner 40.” That is wrong.

Petitioner errs for at least three reasons. First, the claims recite a mounting element (not a “mounting portion”). Second, the Petition annotates the *'133 Patent*’s

Fig. 4 with the word “flange,” despite that word appearing nowhere in that reference. Third, the *'133 Patent* expressly states that grooves 46, 47 are for “oil” and in areas “capable of flexure”—undermining Petitioner’s allegation that these areas are intended to “limit movement.” Pet. at 67. Despite all these failings, lining 40 is simply disposed on the top surface of shoe 41 without any separate “mounting element,” as required by claims 1 and 11. Ex. 1007 at 2:31–45; Figs. 1, 4.

Petitioner thus fails to identify any proper structure in the *'133 Patent* corresponding to the “mounting element” of claims 1 and 11. And while Petitioner does not rely in its analysis of claims 1 and 11 on *DE364* for this “mounting element,” nothing in this reference cures the defects of the *'133 Patent*. Ground 5 is thus defective, even under Petitioner’s construction of “mounting element,” as the *'133 Patent* discloses only grooves for oil passages and flexible areas, not any structure that secures a bearing pad to a base, as claimed.

Moreover, the Petition’s defect discussed above—e.g., the failure to articulate the proposed modifications or how the art is allegedly combined (*supra*, Section VI.A)—also applies to Ground 5. For example, dependent claim 3 relies on *DE364* for the claimed “mounting element” limitations, despite the Petition relying on the *'133 Patent* in claim 1 for this “mounting element.” Again, the Petition never articulates what particular modifications to the *'133 Patent* these alleged teachings of *DE364* would allegedly cause a POSITA to make. The same is true for at least

claims 4, 10, 13, 14, and 20.

As to all the dependent claims subject to Ground 5, they distinguish the prior art for at least the reasons given above for claims 1, 11, and 21. For at least these reasons, Ground 5 is defective and institution should be denied.

E. Ground 6: The Challenged Claims Are Not Obvious Over the *Metso Brochure*, the '993 Publication, and Trygg

Here, Petitioner relies on three disparate references: a marketing brochure with one short passage on bearings (*Metso Brochure*), a patent application for wind-turbine bearings ('993 Publication), and a trade article describing general advantages of certain bearings (*Trygg*). Pet. at 74-80. This collection of unrelated materials fails to disclose or suggest the subject matter of claims 1 and 11.

First, Petitioner begins with the *Metso Brochure* as its primary reference. Pet. at 75-76. This brochure describes and shows an assembly having a single continuous metal bearing. Ex. 1006 at 5 (drawing figures showing cutaway portions of one annular bearing). Thus, the *Metso Brochure* does not describe a bearing of a type having “a plurality of fluid bearings, said fluid bearings each comprising a polymer bearing pad mounted to a base,” as required by claims 1 and 11. The Petition does not allege that any of the other art cited in this ground cures this defect. The Petition only has its improper and standalone reference to the '993 Publication. Pet. at 76; *see also supra*, Section IV.A.

Second, Petitioner alleges that the claimed “mounting element” is somehow met by the “pads orientation.” Pet. at 78 (“The pads orientation on the bottom of the recess against the sidewalls thus comprise a ‘mounting element.’”) (citing Smith at ¶289). That interpretation is both incorrect and nonsensical. The claimed “mounting element” recited in claims 1 and 11 is a distinct structural feature of the polymer bearing pad that secures the polymer bearing pad to the base. Orientation of a pad is not a structure, much less the separate “mounting element” required by the claims. Thus, even under Petitioner’s construction, Ground 6 is defective.

The *’993 Publication* does not cure this defect, either; nor does Petitioner allege that it does. Petitioner relies on the *’993 Publication* for the reference’s alleged disclosure of “polymer.” Pet. at 75-76. While the Petition does mention the *’993 Publication* with regard to that reference’s disclosure of a “pivot bearing,” Pet. at 78, the Petition does not cite to the reference with regard to the “mounting element.” The same is true for *Trygg*, which the Petition appears to rely on only in the corresponding “motivation” section and not for any aspect related to the “mounting element.” See Pet. at 79.

For at least these reasons, Ground 6 is also defective and institution should be denied.

VII. CONCLUSION

For at least the above reasons, Petitioner has failed to establish a reasonable likelihood of showing that any of claims 1-26 of the '604 Patent are unpatentable as obvious. Accordingly, Patent Owner respectfully submits that the Board should deny institution of the Petition for *inter partes* review.

Respectfully submitted,

Dated: September 16, 2025

By: / Timothy J. May /
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Metso Finland Oy

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I, Timothy J. May, certify that **Patent Owner's Preliminary Response** contains 4,450 words, excluding those portions identified in 37 C.F.R. § 42.24(a), as measured by the word-processing system used to prepare this paper.

Dated: September 16, 2025

By: / Timothy J. May /
Timothy J. May,
Reg. No. 41,538

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **Patent Owner's Preliminary Response** was served on September 16, 2025, via e-mail directed to counsel of record for the Petitioner at the following:

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Petitioner has consented to service by electronic mail.

Dated: September 16, 2025

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