

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ABIOMED, INC., ABIOMED R&D, INC., and
ABIOMED EUROPE GMBH,
Petitioner,

v.

MAQUET CARDIOVASCULAR, LLC,
Patent Owner.

Case IPR2017-02134
Patent 7,022,100 B1

Before BART A. GERSTENBLITH, JEREMY M. PLENZLER, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge*
GERSTENBLITH.

Dissenting opinion filed by *Administrative Patent Judge* PLENZLER.

GERSTENBLITH, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
35 U.S.C. §§ 314(a); 37 C.F.R. § 42.108

I. INTRODUCTION

A. *Background*

Abiomed, Inc., Abiomed R&D, Inc., and Abiomed Europe GmbH (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of *inter partes* review of claims 9–12 and 14 of U.S. Patent No. 7,022,100 B1 (“the ’100 patent”). Maquet Cardiovascular, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6.

Pursuant to 35 U.S.C. § 314(a), an *inter partes* review may be instituted only if “the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” *See* 37 C.F.R. § 42.108(c). For the reasons given below, on this record, we exercise our discretion pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a) and do not institute an *inter partes* review of the ’100 patent.

B. *Related Proceedings*

Petitioner and Patent Owner identify a number of proceedings related to the ’100 patent and to patents related to the ’100 patent. Pet. 1–2; Paper 3, 1–3.

C. *Real Parties in Interest*

The Petition identifies “Abiomed, Inc., Abiomed R&D, Inc., and Abiomed Europe GmbH” as real parties in interest. Pet. 1. Patent Owner identifies itself, “Maquet Cardiovascular, LLC,” as the sole real party in interest. Paper 4, 1.

D. The References

Petitioner relies upon the following references:

U.S. Patent No. 5,061,273, issued October 29, 1991 (Ex. 1006, “Yock”);

Wampler et al., *Clinical Experience with the Hemopump Left Ventricular Assist Device*, Supported Complex and High Risk Coronary Angioplasty, Ch. 14, 231–49 (Springer 1st ed. 1991) (Ex. 1007, “Wampler”);

U.S. Patent No. 4,625,712, issued December 2, 1986 (Ex. 1008, “Wampler ’712”); and

Jegaden, *Clinical Results of Hemopump Support in Surgical Cases*, published in *Temporary Cardiac Assist with an Axial Pump System*, p. 61–65 (Springer 1991) (Ex. 1033, “Jegaden”).

E. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 9–12 and 14 of the ’100 patent on the following ground:

References	Basis	Claims challenged
Wampler, Wampler ’712, Jegaden, and Yock	§ 103(a)	9–12 and 14

Petitioner supports its challenge in IPR2134 with a Declaration by John M. Collins, Ph.D., dated September 21, 2017 (Ex. 1002); a Declaration by Kiersten Batzli, dated September 22, 2017 (Ex. 1037); and an Affidavit of Susanne Leupold (Ex. 1060).

F. The ’100 Patent

The ’100 patent “relates generally to blood pumps and, more particularly, to an improved intra-vascular blood pump having a guide

mechanism which provides the ability to selectively guide the intravascular pump to a desired location within a patient's circulatory system." Ex. 1001, 1:12-16. Figures 1 and 3 of the '100 patent are exemplary and are reproduced below.

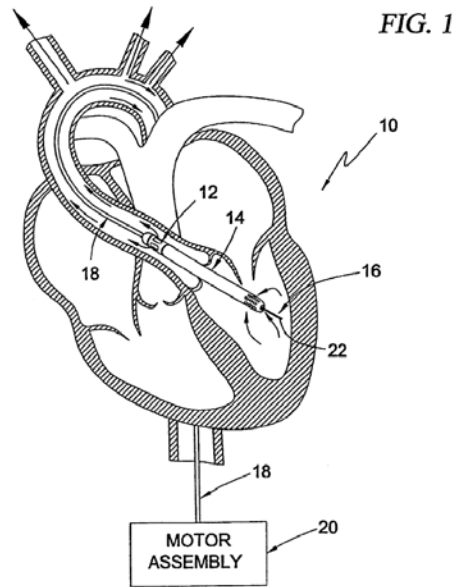


Figure 1 "is a partial sectional view of a human heart illustrating an intravascular blood pump system having an 'over-the-wire' type guide mechanism . . . positioned, by way of example, in a trans-valvular configuration to provide left-heart assist." *Id.* at 5:8-13.

FIG. 3

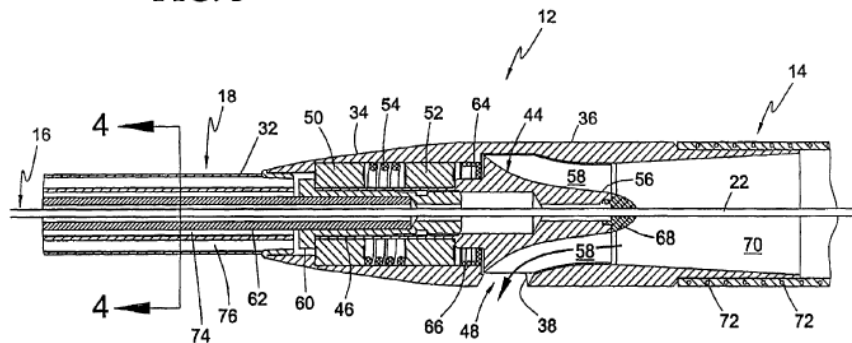


Figure 3 "is a cross-sectional view illustrating an exemplary construction of the blood pump, drive cable assembly, and cannula of the intravascular blood pump system." *Id.* at 5:18-21.

The '100 patent explains that its “intravascular blood pump system . . . overcomes the drawbacks of the prior art by providing a guide mechanism as part of the intravascular blood pump.” *Id.* at 6:50–53. Intravascular blood pump system 10 includes intravascular blood pump 12, cannula 14, and over-the-wire type guide mechanism 16. *Id.* at 7:12–16. Intravascular blood pump 12 is driven by drive cable assembly 18 and motor assembly 20. *Id.* at 7:16–17. Guide mechanism 16 is described as an “over-the-wire” guide mechanism having “a suitable guide element dimensioned to pass slideably through a central lumen extending through the drive cable 18, blood pump 12, and cannula 14.” *Id.* at 7:17–21. The guide element may include guide wire 22. *Id.* at 7:23–24.

The '100 patent explains that “‘over-the-wire’ guide mechanism 16 provides the ability to selectively guide the blood pump 12 and cannula 14 to a predetermined position in the circulatory system of a patient.” *Id.* at 7:25–28. First, guide wire 22 is introduced into the patient’s vascular system and advanced to a desired location in the circulatory system. *Id.* at 7:30–39. Intravascular blood pump 12 and cannula 14 are then advanced along guide wire 22 to the location in the circulatory system. *Id.* at 7:42–46.

G. Illustrative Claim

Claim 9 is the sole independent claim challenged in this proceeding and is reproduced below:

9. An intravascular blood pump system comprising:
 - an intravascular blood pump having a cannula coupled thereto, said intravascular blood pump including a rotor, a shroud for receiving said rotor, and a drive cable coupled to said rotor for driving said rotor within said shroud, and

a guide mechanism adapted to guide said intravascular blood pump and cannula to a predetermined location within the circulatory system of a patient,

wherein a drive cable sheath is provided having a central lumen for receiving said drive cable, and

wherein a purge fluid delivery system is coupled to said drive cable sheath to deliver purge fluid to said rotor.

Ex. 1001, 19:43–55.

II. CLAIM CONSTRUCTION

We do not need to construe expressly any claim terms for purposes of this Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (only terms that are in controversy need to be construed, and these need be construed only to the extent necessary to resolve the controversy).

III. ANALYSIS – 35 U.S.C. § 314(a)

“The Director may not authorize an inter partes review to be instituted unless the Director determines . . . that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). This section grants the Director discretion to deny institution of a later-filed petition. *General Plastic Industries Co. v. Canon Kabushiki Kaisha*, Case IPR2016–01357, slip op. at 15 (PTAB Sept. 6, 2017) (Paper 19) (precedential); *see also* 37 C.F.R. § 42.108(a) (“the Board *may* authorize the review to proceed on all or some of the challenged claims and on all or some of the grounds of unpatentability asserted for each claim”) (emphasis added). As the Board has explained, “[t]here is no *per se* rule precluding the filing of follow-on petitions after the Board’s denial of one or more first-filed petitions on the

same patent.” *General Plastic*, slip op. at 15. *General Plastic* sets forth seven non-exhaustive factors that inform our analysis:

1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
3. whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition;
4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
6. the finite resources of the Board; and
7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

Id. at 16. No one factor is dispositive and, as we explained in our decision denying institution in related IPR2017-02150, “not all the factors need to weigh against institution for us to exercise our discretion under § 314(a).” *Abiomed, Inc. v. Maquet Cardiovascular, LLC*, Case IPR2017-02150, Paper 11 at 7 (PTAB Mar. 12, 2018).

As explained in *General Plastic*: “In exercising discretion under 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a), we are mindful of the goals of the [America Invents Act (“AIA”)]—namely, to improve patent quality and make the patent system more efficient by the use of post-grant review procedures.” *General Plastic*, slip op. at 16 (citing H.R. Rep. No. 112-98,

pt. 1, at 40 (2011)). Additionally, although “an objective of the AIA is to provide an effective and efficient alternative to district court litigation, . . . [there is a] potential for abuse of the review process by repeated attacks on patents.” *Id.* at 16–17. “A central issue addressed by the *General Plastic* factors is balancing the equities between a petitioner and a patent owner when information is available from prior Board proceedings for a subsequent proceeding.” *Apple Inc. v. Immersion Corp.*, Case IPR2017-01371, Paper 7 at 10–11 (PTAB Nov. 21, 2017) (citing *General Plastic*, slip op. at 15–19).

Before we address the *General Plastic* factors, however, the following additional information is worthy of note. First, this Petition is the last of *twenty* petitions to be addressed by the Board, filed by Petitioner against six related patents held by Patent Owner, and one of three petitions challenging claims of the ’100 patent. We declined to institute *inter partes* review in each of the previous nineteen cases.¹

Second, the ’100 patent is involved in a related district court litigation brought by Petitioner as a declaratory judgment action against Patent Owner for non-infringement of the ’100 patent. Pet. 2. Patent Owner represents that it originally counter-claimed for infringement of claims 9–12 and 14, but dropped the claims in response to the district court’s order limiting the number of claims asserted. Prelim. Resp. 2. Despite Patent Owner dropping these claims from the district court action, Petitioner refused to drop its Petition in this proceeding. *Id.* (citing Ex. 2001). Thus, at present, Patent

¹ For purposes of this Decision, we consider the petition filed in IPR2017-02135 to be the nineteenth.

Owner does not assert that Petitioner infringes claims 9–12 and 14 of the '100 patent.

We now consider the non-exhaustive factors from *General Plastic* as well as several additional facts relevant to our consideration of this issue.

1. *Whether the Petitions are Directed to the Same Claims*

As noted above, the Petition challenges the patentability of claims 9–12 and 14, of which claim 9 is independent. In IPR2017-01025 (“IPR1025”), Petitioner challenged claims 16–18, of which claim 16 is independent.

Patent Owner explains that claims 9 and 16 share several common limitations. *See* Prelim. Resp. at 5–6 (comparing the claims). Additionally, Patent Owner maps many of the other limitations of claim 16 to limitations in several claims from the other five related patents challenged in the other nineteen petitions filed by Petitioner. *Id.* at 6–7. We agree with Patent Owner that the Petition challenges claims of scope similar to the claims challenged in IPR1025. In *Apple*, the Board found that claims challenged solely in a second petition, including a newly challenged independent claim, covered essentially the same scope as claims challenged in a first petition and determined that this factor weighed against institution. *Apple*, slip op. at 11–13. In *Apple*, the Board was faced with considering a second petition. Here, we are faced with considering a third petition challenging the '100 patent and the twentieth petition challenging one of six related patents, many of which contain limitations in common with the claims challenged

here. In light of the unique facts here, we find that this factor is at best neutral if not slightly weighing against institution.²

2. *Whether Petitioner Knew or Should Have Known of the Newly Asserted Prior Art*

Petitioner's challenge is based on four references: Wampler, Wampler '712, Jegaden, and Yock. Although not forming the basis of Petitioner's challenge in IPR1025, Petitioner submitted each of the four references as an exhibit in that case. *See* IPR1025, Ex. 1006 (Yock), Ex. 1007 (Wampler), Ex. 1008 (Wampler '712), Ex. 1033 (Jegaden). Thus, Petitioner knew of each of these references at the time it filed the petition in IPR1025. Accordingly, we find that this factor weighs against institution.

3. *Whether Information from Prior Proceedings was Available*

Petitioner filed the petition in IPR1025 on March 11, 2017, and Patent Owner filed a preliminary response to that petition on June 27, 2017. Petitioner filed the Petition in this proceeding on September 22, 2017. Thus, Patent Owner's preliminary response in IPR1025 was available to Petitioner for nearly three months prior to filing the IPR2134 Petition. Additionally,

² The dissent places undue consideration on only one factor—whether the petitions are directed to the same claims—and fails to give adequate weight to the full context in which the Petition in this proceeding comes before us. Because different claims are challenged in this proceeding, the dissent fails to find a sufficient basis for exercising our discretion to deny institution. As § 314(a) is based on discretion, reasonable minds may, and will, differ, just as they do with respect to the Board's application of discretion pursuant to 35 U.S.C. § 325(d). Nonetheless, suffice it to say that if *General Plastic*, designated as precedential with respect to its discussion of the factors relied upon here, intended one factor to be dispositive, it would not have provided a non-exhaustive list of factors for consideration.

Patent Owner's preliminary responses in several of the other nineteen proceedings were also available to Petitioner prior to filing the Petition here.

This factor weighs heavily in our analysis because Petitioner tailored its arguments here in light of the positions previously set forth by Patent Owner in its preliminary responses in the related proceedings. *See, e.g.*, Pet. 26 (addressing Patent Owner's prior position regarding the level of skill in the art set forth in the preliminary response in IPR1025); *id.* at 40 (addressing Patent Owner's prior position regarding whether one of ordinary skill in the art would have combined the teachings of Wampler and Jegaden in the manner proposed by Petitioner as set forth in the preliminary response in IPR2017-01201). As noted above, many of the other petitions filed by Petitioner relied upon one or more of the same references asserted here and, thus, Patent Owner's preliminary responses in those proceedings were available to Petitioner for use in framing the arguments set forth in the present proceeding. Accordingly, we find that this factor weighs heavily against institution.

4. *Elapsed Time*

As noted above, nearly six months passed between Petitioner's filing of the petition in IPR1025 and the Petition in IPR2134. Accordingly, we find that this factor weighs against institution.

5. *Whether Petitioner Provides Adequate Explanation for the Time Lapse Between Petitions Directed to the Same Claims*

As noted above, the Petition challenges similar, but different, claims of the '100 patent as challenged in IPR1025. Thus, as framed by *General Plastic*, this factor would favor institution. Nonetheless, as discussed above, the claims challenged here cover similar scope as the claims challenged in

both IPR1025 and several of the other nineteen petitions filed by Petitioner. A time lapse, in general, potentially delays and frustrates the purposes of providing an effective and efficient alternative to district court litigation. Thus, it can be helpful for a petitioner to explain large time lapses especially in the context of multiple petitions filed against the same patent claims or claims of similar scope in the same patent previously challenged. That Petitioner provided no such explanation here, does not negate that this *General Plastic* factor favors institution; rather, Petitioner's lack of any explanation for nearly six month time delay weighs generally against institution when judged in accordance with the goals of the AIA. Accordingly, even though this factor as stated in *General Plastic* may weigh in favor of institution, Petitioner's failure to provide any explanation for the nearly six month time lapse weighs against institution.

6. *Board Resources and the Timing of a Final Determination*

These factors do not weigh in Petitioner's favor and, at best, are neutral. *See General Plastic*, slip op. at 21 (“multiple, staggered petition filings” is, in general, “an inefficient use of the *inter partes* review process and the Board's resources”).

7. *Additional Considerations*

There are several additional considerations in light of the facts before us. First, we find that efficient use of the parties' resources also weighs against institution. In particular, we have not instituted *inter partes* review based on any of the other nineteen petitions filed by Petitioner. Thus, were we to institute review here, the parties' resources would be spent

disproportionately on a very small part of the aggregate dispute between the parties.

Second, institution here would fail to adhere to one of the goals of the adoption of post-grant review procedures because it would not make the patent system more efficient for many of the same reasons. Specifically, the issues addressed here would likely have minimal impact on the related district court litigation at least because claims 9–12 and 14 of the '100 patent are no longer asserted by Patent Owner in the litigation. Thus, resolution of the parties' dispute regarding these claims, if there even is a dispute, fails to provide an efficient mechanism for addressing the dispute between the parties.

Third, as explained above, Petitioner waited nearly six months between filing the petition in IPR2025 and filing the present Petition. We are not presented with the circumstance where a patent owner adds additional claims to a related district court action that prompts a petitioner to file an additional petition challenging those claims. To the contrary, nearly the opposite circumstance is presented—namely, Patent Owner no longer asserts that Petitioner infringes claims 9–12 and 14 of the '100 patent.

Accordingly, we find that these additional considerations also weigh against institution.

IV. CONCLUSION

On balance we determine that the *General Plastic* factors and the additional considerations discussed above weigh against institution in this case. Accordingly, we exercise our discretion to deny institution pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a).

V. ORDER

For the foregoing reasons, it is:

FURTHER ORDERED that the Petition (Paper 2) is *denied* as to the challenged claims of the '100 patent; and

FURTHER ORDERED that no *inter partes* review is instituted.

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PLENZLER, *Administrative Patent Judge*, dissenting.

I do not agree with the majority's decision to apply our discretion under 35 U.S.C. § 314(a) to deny the Petition. Accordingly, I respectfully dissent.

Based on my review of the circumstances surrounding the Petition, I do not believe the factors from *General Plastic* weigh in favor of exercising our discretion to deny institution. Initially, I note “[t]here is no dispute between the parties that this Petition challenges ‘new’ claims of the ’100 Patent—meaning claims that were not challenged in a prior petition.” Prelim. Resp. 4. Moreover, I note that this is not a situation where claims dependent from a previously addressed independent claim are being

challenged.¹ This makes the first factor weigh heavily in favor of reaching the merits of the Petition.

Because the same claims have not been challenged previously, I give little weight to the remaining *General Plastic* factors. In particular, I note that the remaining factors are most informative when the *same claims* have been challenged. Factor 5, for example, clearly questions “whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the *same claims* of the same patent.” The time lapse in factor 5 is that from factor 4, implying factor 4 also relates to the *same claims*. Because the claims at issue are different than those previously challenged, these factors must weigh against exercising our discretion. Moreover, I would not use the “additional considerations” provided by the majority to justify exercising our discretion under these circumstances.

Ultimately, all we are left with is that Petitioner knew or should have known of the newly asserted prior art and that information from prior proceedings, addressing different claims, was available. Those circumstances arise for many of the petitions that come before us.

Based on the particular facts before us, I would not exercise our discretion under § 314(a) to deny institution.

¹ I appreciate such circumstance could provide a backdoor for subsequent challenges to a previously addressed independent claim.

IPR2017-02134
Patent 7,022,100 B1

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