

No. _____

**In The
Supreme Court of the United States**

HITACHI METALS, LTD., PETITIONER

v.

ALLIANCE OF RARE-EARTH
PERMANENT MAGNET INDUSTRY

*ON PETITION FOR WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT*

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

This petition presents the same question that the Court is considering in *Oil States Energy Services, LLC v. Greene's Energy Group, LLC*, No. 16-712:

Whether *inter partes* review—an adversarial process used by the United States Patent and Trademark Office to analyze the validity of existing patents—violates the Constitution by extinguishing private property rights through a non-Article III forum without a jury.

PARTIES TO THE PROCEEDINGS

The parties to the proceedings in the court of appeals and in the Patent Trial and Appeal Board are listed in the caption.

CORPORATE DISCLOSURE STATEMENT

The parent corporation of Hitachi Metals, Ltd. is Hitachi, Ltd. No other publicly held company holds 10% or more of the stock of Hitachi Metals, Ltd.

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PETITION FOR A WRIT OF CERTIORARI

Petitioner Hitachi Metals, Ltd. respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinion of the court of appeals (App., *infra*, 1a-28a) is unreported. The final written decisions of the Patent Trial and Appeal Board (App., *infra*, 29a-107a) are unreported.

JURISDICTION

The court of appeals entered judgment on July 6, 2017. Petitioner timely filed a petition for rehearing on August 7, 2017. The court of appeals denied the petition on August 23, 2017. This Court's jurisdiction is invoked under 28 U.S.C. § 1254(1).

INTRODUCTION

In *Oil States Energy Services, LLC v. Greene's Energy Group, LLC*, No. 16-712, this Court is considering whether *inter partes* review of the validity of existing patents violates the Constitution by extinguishing private property rights through a non-Article III forum without a jury. The Court's resolution of that question will determine whether the Federal Circuit's judgment in this case should be vacated.

Here, the United States Patent and Trademark Office (“Patent Office”) instituted *inter partes* review of two of Hitachi Metals’ existing patents. In the *inter partes* proceedings, the Patent Trial and Appeal Board (“Board”) held that twelve claims of Hitachi Metals’ existing patents are unpatentable. The Federal Circuit affirmed the Board’s unpatentability determination as to ten of those claims. But if extinguishing existing patent rights through *inter partes* review at the Patent Office violates the Constitution, then the unpatentability determinations here are unconstitutional, and the Federal Circuit’s judgment should be set aside.

This Court should therefore hold this petition until it decides *Oil States*. If the Court holds that extinguishing patent rights through *inter partes* review violates the Constitution, then the Court should grant the petition, vacate the Federal Circuit’s judgment, and remand.

STATEMENT

A. Factual Background

Hitachi Metals manufactures and sells the world’s strongest and most popular sintered rare-earth permanent magnets. Sintered rare-earth magnets are the strongest type of permanent magnets commercially made. CA JA 939-40, 1430. They are widely used in electric motors, hard-disk drives, speakers, and more. CA JA 1434.

Hitachi Metals owns U.S. Patent Nos. 6,537,385 (“’385 patent”) and 6,491,765 (“’765 patent”). Both

patents were issued before enactment of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011). The application for the '385 patent was filed on July 9, 2002, and the patent issued on March 25, 2003. CA JA 66. The application for the '765 patent was filed on May 9, 2001, and the patent issued on December 10, 2002. CA JA 77.

The patents claim significant improvements to the process of manufacturing alloy powder used to produce sintered rare-earth magnets. A significant problem that manufacturers face during production of sintered rare-earth magnets is oxidation of the alloy powder. Oxidation results in magnets having weaker magnetic fields or magnets that are more susceptible to demagnetization. CA JA 81 (col.2:29-36). Oxidation also makes the manufacturing process extremely hazardous; oxidation can result in spontaneous combustion, and uncontrolled oxidation can cause large explosions at manufacturing plants. CA JA 85 (col.10:36-42), 653, 2688, 2743.

The inventors of the '385 and '765 patents identified one of the primary causes of oxidation during sintered rare-earth magnet processing: super-fine particles of alloy powder that are rich (relative to the total powder) in rare-earth elements. CA JA 81 (col.2:18-32). These particles are called R-rich particles. CA JA 81 (col.2:59-63). The inventors designed process steps to carefully control and ultimately remove a substantial portion of this super-fine R-rich powder. CA JA 86-87 (col.12:65-col.13:6).

The inventors' solution went against conventional wisdom at the time of patenting. CA JA 83 (col.5:1-14). Removing R-rich powder reduces the overall concentration of rare-earth element in the powder, even though the rare-earth element is indispensable for a magnet with good magnetic properties. CA JA 82-83 (col.4:66-col.5:1-5). The inventors showed that isolating and removing only the R-rich super-fine powder actually improved magnetic strength and permanence. CA JA 87 (col.13:2-5). Removing the R-rich super-fine powder also reduced the risk of extreme hazards, such as combustion and explosion, during the production process. CA JA 87 (col.13:4-6).

B. Proceedings Below

1. Proceedings before the Board

Respondent, the Alliance of Rare-Earth Permanent Magnetic Industry ("Alliance"), filed requests for *inter partes* review of the '385 and '765 patents with the Patent Office. App, *infra*, 4a. The Board granted the requests, instituting *inter partes* review of claims 1, 5, and 6 of the '385 patent and claims 1-4, 11, 12, and 14-16 of the '765 patent. App., *infra*, 30a, 75a.

The Alliance argued that the challenged claims were unpatentable because they were obvious combinations of elements disclosed in various disparate references throughout the prior art. *E.g.*, App., *infra*, 42a-43a. The Alliance pointed to five different prior-art references, each of which disclosed a subset of the elements of Hitachi Metals' patent claims. App., *infra*, 5a-11a.

Hitachi Metals did not dispute that, when viewed in combination, the various prior-art references disclosed each of the elements of its claims (except for claim 4 of the '765 patent). But as this Court has explained, an invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Hitachi Metals contended that its claims were not obvious because a person of skill in the art would not have combined the prior-art references to arrive at Hitachi Metals’ inventions. App., *infra*, 5a-7a, 9a, 11a, 88a-89a.

Specifically, Hitachi Metals presented evidence that a person of ordinary skill in the art would have expected that the combinations would result in failure. According to Hitachi Metals’ evidence, combining the disclosures in the references would have required discarding large portions—more than half—of the alloy powder produced in the combined processes. App., *infra*, 5a-6a, 90a; CA JA 969-71. Hitachi Metals contended that a skilled artisan would not have pursued a combination expected to result in discarding such large quantities of alloy powder because the discarded powder would have been extremely hazardous and because discarding the powder would have led to reduced yield and poorer-quality magnets.

The Board rejected Hitachi Metals’ evidence, reasoning that it goes only to whether the combination would have made “commercial sense,” which “does not control the obviousness determination.” App., *infra*,

90a. The Board concluded that all of the challenged claims of the '385 and '765 patents were obvious, reasoning that the “claims represent the combination of prior art elements according to known methods to yield a predictable result.” App., *infra*, 91a; see App., *infra*, 72a-73a, 106a.¹

2. Proceedings before the court of appeals

a. The Federal Circuit affirmed in part, vacated in part, and remanded.

The court of appeals “agree[d] with Hitachi that the Board applied internally inconsistent reasoning in rejecting Hitachi’s evidence” that a skilled artisan would not have combined the various prior-art references. App., *infra*, 14a. The court observed that it was inconsistent for the Board to have rejected Hitachi Metals’ evidence “on the basis that ‘commercial [considerations] do[] not control the obviousness determination,’ while also finding that one of skill in the art would have been motivated to combine the references due to ‘design incentives.’” App., *infra*, 14a (alterations by court of appeals; citations omitted). The court explained that “[i]f the Board’s analysis had stopped there, we might remand for further analysis that is not internally inconsistent.” *Ibid*.

¹ In addition to obviousness, the Board also found claim 1 of the '385 patent to be anticipated by a single prior-art reference. App., *infra*, 99a-102a.

But, the court reasoned, “the Board made additional findings to support its obviousness determinations, including that one of skill in the art would have known to mitigate the alleged reduction in yield by adjusting * * * settings during pulverization.” *Ibid.* Yet the only “finding” that the court pointed to was a parenthetical in one of the Board’s decisions in which the Board simply “cit[ed] expert testimony that ‘a person of skill in the art would have known to adjust’” settings. *Ibid.* (quoting App., *infra* 89a, 97a). The court deemed this mere parenthetical citation to be a “finding” that was “supported by substantial record evidence.” *Ibid.*

Accordingly, the court of appeals affirmed the Board’s unpatentability decision as to claims 1, 5, and 6 of the ’385 patent and claims 1, 2, 11, 12, and 14-16 of the ’765 patent. App., *infra*, 27a.

The court of appeals vacated the Board’s decision as to claims 3 and 4 of the ’765 patent, concluding that it was based on an unreasonably broad claim construction. App., *infra*, 21a-27a. Claim 4 includes a step requiring that the alloy powder be “finely pulverized in a high-speed flow of gas” and that the gas “comprises oxygen.” CA JA 87 (col.13:40-44). The prior-art reference on which the Board relied to show the existence of this limitation in the prior art disclosed only an air stream used for a separate sub-step of the claims—particle classification. App., *infra*, 56a-57a. The court of appeals concluded that the prior art’s disclosure “of an air stream for *particle classification only* cannot meet the limitation of claim 4, which

requires the use of a high-speed flow of gas comprising oxygen for *fine pulverization*.” App., *infra*, 25a (emphasis by court of appeals). The court also observed that its conclusion as to claim 4 “necessarily raises a question with respect to the construction and obviousness of claim 3.” App., *infra*, 26a. Thus, the court vacated the Board’s obviousness determination on claims 3 and 4 of the ’765 patent and remanded for further consideration. App., *infra*, 27a.

b. After oral argument in the Federal Circuit, but before the court issued its decision, this Court granted the petition for a writ of certiorari in *Oil States*. Once the Federal Circuit’s decision issued, Hitachi Metals timely sought rehearing. Noting that the outcome in *Oil States* would affect whether Hitachi Metals’ patent claims could have been canceled in *inter partes* review, Hitachi Metals asked the court of appeals to hold its petition pending *Oil States*. The court denied the petition. App., *infra*, 108a-09a.

REASONS THE PETITION SHOULD BE GRANTED

This case presents a question identical to the one that this Court will resolve in *Oil States*: whether extinguishing patent claims in *inter partes* review violates the Constitution.

In this case, the Patent Office granted *inter partes* review of Hitachi Metals’ ’385 and ’765 patents. In the *inter partes* proceedings, the Board canceled three claims of the ’385 patent and nine claims of the ’765 patent. The court of appeals then affirmed the

unpatentability determinations as to all but two of those claims.

The Board in this case thus took the very action that is being reviewed by this Court in *Oil States*—it extinguished private property rights (patent claims) through a non-Article III forum (*inter partes* review at the Patent Office) without a jury. Because the Board’s unpatentability determinations were made in the context of *inter partes* review, *Oil States* will control whether the Board’s unpatentability determinations were unconstitutional.

Hitachi Metals need not have raised the *Oil States* argument in its opening brief in the court of appeals to receive the benefit of a favorable decision. The Federal Circuit’s decision in *MCM Portfolio LLC v. Hewlett-Packard Co.* foreclosed the contention in the Federal Circuit that *inter partes* review violates the Constitution. 812 F.3d 1284, 1292-93 (Fed. Cir. 2015). When an intervening Supreme Court decision reverses previously binding precedent of the court of appeals, an appellant in a pending case may raise the intervening change in law even if not raised in the opening appeal brief. *Joseph v. United States*, 135 S. Ct. 705, 706-07 (2014) (Kagan, J., respecting denial of certiorari). Here, Hitachi Metals raised the *Oil States* argument in its rehearing petition shortly after this Court granted certiorari. Hitachi Metals will thus be entitled to the benefit of a favorable decision in *Oil States*.

This Court should therefore hold this petition until it decides *Oil States*. And if the Court decides that

inter partes review cannot be used to extinguish patent claims, then the Court should grant the petition, vacate the Federal Circuit's judgment, and remand the case for further proceedings.

CONCLUSION

The petition should be held pending this Court's disposition of *Oil States Energy Services, LLC v. Greene's Energy Group, LLC*, No. 16-712. Should the Court hold in *Oil States* that extinguishing patent claims in *inter partes* review violates the Constitution, the petition should be granted, the judgment vacated, and the case remanded for further proceedings.

Respectfully submitted,

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