

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY CORPORATION,
Petitioner,

v.

FUJIFILM CORPORATION,
Patent Owner.

Case IPR2017-00809
Patent 6,703,106 B2

Before JO-ANNE M. KOKOSKI, JEFFREY W. ABRAHAM, and
MICHELLE N. ANKENBRAND, *Administrative Patent Judges*.

ABRAHAM, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Sony Corporation (“Petitioner”) filed a Petition seeking *inter partes* review of claims 1–6 (“challenged claims”) of U.S. Patent No. 6,703,106 B2 (Ex. 1001, “the ’106 patent”). Paper 2 (“Pet.”). Fujifilm Corporation (“Patent Owner”) filed a Patent Owner Preliminary Response to the Petition. Paper 12 (“Prelim. Resp.”). Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we institute an *inter partes* review of claims 1–6 as discussed below.

Our findings of fact and conclusions of law are based on the record developed thus far. This is not a final decision as to the patentability of any challenged claim. Any final decision will be based on the full record developed during trial.

II. BACKGROUND

A. *Related Proceedings*

The parties indicate that the ’106 patent is involved in *Certain Magnetic Data Storage Tapes and Cartridges Containing the Same* (ITC Investigation No. 337-TA-1012). Pet. vii; Paper 3, 2. Petitioner further identifies the following litigation as related: *Sony Corporation v. Fujifilm Holdings Corporation*, Civil Action No. 1:16-cv-05988-PGG (S.D.N.Y). Pet. vii.

B. *The ’106 Patent*

The ’106 patent, titled “Magnetic Recording and Reproducing Method and Magnetic Recording Medium for Use in the Method,” issued on March 9, 2004. Ex. 1001, [54], [45]. The ’106 patent is directed to a high-density magnetic recording and reproducing method that does not generate noise.

Id. at 2:16–18. In discussing prior art magnetic recording media, the ’106 patent states that when “higher density recording is done by further lessening a track width or thinning the magnetic layer thickness, a sufficient S/N [signal-to-noise] ratio cannot be obtained at reproduction. In particular, the influence of the abrasive becomes large when an MR [magneto-resistive] head is used, which causes the degradation of S/N ratio.” *Id.* at 2:11–15.

The ’106 patent teaches recording and producing a signal in a track width (A) of less than 5 μ m on a magnetic recording medium. *Id.* at 2:32–35. The magnetic recording medium used in the recording and reproducing method of the ’106 patent includes a support, a substantially nonmagnetic lower layer provided on the support, and a magnetic layer containing a ferromagnetic metal powder, an abrasive, and a binder provided on the nonmagnetic lower layer, “wherein the average longer size (B) of the abrasive particle(s) on the magnetic layer surface is $\frac{1}{3}$ or less of the track width (A).” *Id.* at 2:33–39. According to the ’106 patent, maintaining this relationship between the average longer size of the abrasive particle(s) present on the magnetic layer surface and track width provides a magnetic recording and reproducing system and method that is “optimal for digital recording” and reproduction with an MR head, and has “excellent” electromagnetic characteristics. *Id.* at 2:25–29, 3:11–17.

With regard to abrasives, the ’106 patent states that “[w]ell-known materials essentially having a Mohs’ hardness of 6 or more” can be used, and indicates a preference for abrasives having a particle size from 0.01 to 2 μ m. *Id.* at 12:5–23. The ’106 patent also discloses a process for preparing the magnetic coating solution for use in the magnetic recording medium, which includes at least a kneading step and a dispersing step, and optionally

a blending step. *Id.* at 18:39–54. According to the '106 patent, “even when the same abrasive is used, the average longer size of the abrasive becomes large depending upon the dispersion condition of the abrasive.” *Id.* at 25:10–13.

The '106 patent also provides a method for determining the average longer size of the abrasive particles that includes subjecting a magnetic layer surface to plasma treatment, drying the surface, observing the particles using an electron microscope, “measuring the largest value of the width (i.e., the longer size), and taking the average value of 50 abrasive particles and/or cluster mainly comprising abrasives as the average longer size.” *Id.* at 3:20–40.

The '106 patent describes several embodiments of the invention disclosed therein, as well as comparative examples, and provides a table comparing measured properties of each. *Id.* at 21:25–24:22, Table 1. These properties include the average longer size of the abrasive, track width, and S/N ratio. *Id.* at Table 1.

C. Challenged Claims

Petitioner challenges claims 1–6 of the '106 patent. Claim 1 is illustrative, and is reproduced below:

1. A magnetic recording and reproducing method comprising recording and reproducing a signal with a magnetic head in a track width (A) of less than 5 μm on a magnetic recording medium comprising a support having provided thereon a magnetic layer containing at least a ferromagnetic powder, an abrasive and a binder, wherein the average longer size (B) of the abrasive particle(s) which are present on the magnetic layer surface is $\frac{1}{3}$ or less of the track width (A).

Ex. 1001, 26:5–14.

D. References

Yamazaki et al., U.S. Patent No. 6,017,605, issued Jan. 25, 2000 (“Yamazaki,” Ex. 1004).

Araki et al., U.S. Patent. No. 6,149,989, issued Nov. 21, 2000 (“Araki,” Ex. 1006).

Endo et al., JP 2000-40218A, published Feb. 8, 2000 (“Endo,” Ex. 1005).

E. The Asserted Grounds

Reference(s)	Statutory Basis	Claims Challenged
Yamazaki	§ 102	1–6
Yamazaki	§ 103	1–6
Yamazaki and Endo	§ 103	1–6
Yamazaki and Araki	§ 103	1–6

Petitioner also relies on the Declaration of David B. Bogy, Ph.D. (Ex. 1015, “the Bogy Declaration”).¹

III. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Absent a special definition for a claim term being set forth in the specification, claim terms are given their ordinary and customary meaning as

¹ Exhibit 1015 is the Corrected Declaration of Dr. Bogy. Dr. Bogy’s original Declaration remains part of the record as Exhibit 1002.

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