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SUGHRUE MION, PLLC 2000 PENNSYLVANIA AVENUE, N.W. SUITE 900 WASHINGTON, DC 20006			CHEUNG, WILLIAM K	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte XUMING XIE and HARUHISA MASUDA

Appeal 2019-003243
Application 15/406,607
Technology Center 1700

Before MARK NAGUMO, MONTÉ T. SQUIRE, and JEFFREY R. SNAY,
Administrative Patent Judges.

SQUIRE, *Administrative Patent Judge.*

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1–19, which are all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ In this Decision, we refer to the Specification filed Jan. 13, 2017 (“Spec.”); Final Office Action dated Mar. 14, 2018 (“Final Act.”); Advisory Action dated July 20, 2018 (“Adv. Act.”); Appeal Brief filed Nov. 13, 2018 (“Appeal Br.”); and Examiner’s Answer dated Jan. 18, 2019 (“Ans.”). There is no reply brief.

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Tsinghua University and Daikin Industries, Ltd. as the real parties in interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Appellant's disclosure relates to a resin composition including an aromatic polyether ketone resin and a fluoro resin. Abstract; Spec. ¶ 2. Claim 1 illustrates the claimed subject matter on appeal and is reproduced below from the Claims Appendix to the Appeal Brief:

1. A resin composition comprising
an aromatic polyether ketone resin (I), and
a fluoro resin (II),
the fluoro resin (II) being a copolymer of tetrafluoroethylene and a perfluoroethylenic unsaturated compound represented by the following formula (1):



wherein R_f^1 represents $-\text{CF}_3$ or $-\text{OR}_f^2$, and R_f^2 represents a C1 to C5 perfluoroalkyl group;

the composition comprising the aromatic polyether ketone resin (I) and the fluoro resin (II) at a mass ratio (I):(II) of 95:5 to 50:50;

the fluoro resin (II) being dispersed as particles in the aromatic polyether ketone resin (I) and ***having an average dispersed particle size of 1.9 μm or smaller.***

Appeal Br. 22 (key disputed claim language italicized and bolded).

REFERENCE

The Examiner relies on the following prior art reference as evidence in rejecting the claims on appeal:

Name	Reference	Date
Sanehiro et al. ("Sanehiro")	JP 2006-274073	Dec. 10, 2006

REJECTION

On appeal, the Examiner maintains the following rejection: claims 1–19 rejected under pre-AIA 35 U.S.C. § 102(b) as being anticipated by Sanehiro.³ Ans. 3.

OPINION

The Examiner determines that Sanehiro discloses a resin composition satisfying all of the limitations of claim 1 and thus, concludes the reference anticipates the claim. Ans. 3–5. Regarding the recitation “having an average dispersed particle size of 1.9 μm or smaller,” the Examiner relies on claims 1–3 of Sanehiro for disclosing that limitation of the claim. *Id.* at 3–4; *see also* Sanehiro, Abstract (disclosing a resin composition “wherein the average particle diameter of the fluoro-resin (B) dispersed in the resin composition is 0.1–30 μm ”).

Appellant argues that the Examiner’s rejection of claim 1 should be reversed because Sanehiro does not disclose a specific resin composition comprising a fluoro-resin that anticipates the “having an average dispersed particle size of 1.9 μm or smaller” limitation of the claim. Br. 7–8. In particular, Appellant contends none of the portions of Sanehiro that the Examiner relies upon in the rejection discloses a specific fluoro-resin having an average dispersed particle size of 1.9 μm or smaller, as required by the claim. *Id.* at 7–8. Rather, Appellant contends Sanehiro discloses fluoro-resin compositions with average particle sizes having a very broad range of 0.1 to 30 μm . *Id.* at 8. Appellant also contends, Sanehiro does not disclose a

³ In making the rejection, the Examiner refers and cites to the English language translation of the Sanehiro et al. reference provided in the record.

specific example or embodiment of a fluoro-resin having an average particle size of 1.9 μm or smaller and, instead, all of the examples in Tables 1 and 2 of Sanehiro have average particle sizes that fall outside the claimed range. *Id.* at 8. In essence, Appellant argues that the Examiner has misapplied the law on anticipation of ranges because, although the prior art range includes a portion of the claimed range, this overlap does not mean that the broader range necessarily anticipates the narrower claimed range. *Id.* at 7–10.

Appellant’s argument is persuasive because the Examiner has not established by a preponderance of the evidence that Sanehiro describes a resin composition comprising a fluoro-resin that anticipates the “having an average dispersed particle size of 1.9 μm or smaller” limitation of the claim.

Anticipation requires a showing that each limitation of a claim is found in a single reference, either expressly or inherently. *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1369 (Fed. Cir. 2005). When a patent claims a range, as in this case, that range is anticipated by a prior art reference if the reference discloses a point within the range. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782 (Fed. Cir. 1985). If the prior art discloses its own range, rather than a specific point, then the prior art is only anticipatory if it describes the claimed range with sufficient specificity such that a reasonable fact finder could conclude that there is no reasonable difference in how the invention operates over the ranges. *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991, 999 (Fed. Cir. 2006).

We do not find the Examiner’s comments at pages 3–4 and 7–8 of the Answer sufficient to establish that Sanehiro anticipates the claim because they appear to be based on a misapplication of the law. Contrary to what the Examiner’s comments seem to imply, as discussed above, the fact that a

prior art reference may disclose a very broad range that overlaps the claimed range, does not necessarily mean that the prior art anticipates the claimed range. *Atofina*, 441 F.3d at 999. Rather, as Appellant correctly points out (Br. 8), to anticipate a claimed range, the prior art must disclose the claimed range with “sufficient specificity.” *Atofina*, 441 F.3d at 999 (holding that “[g]iven the considerable difference between the claimed range and the range in the prior art, no reasonable fact finder could conclude that the prior art describes the claimed range with sufficient specificity to anticipate this limitation of the claim”).

Here, although the claimed range and the prior art range overlap and the claimed range is narrower than the prior art range, as Appellant notes (Br. 8), Sanehiro does not specifically disclose a narrow range that falls within the claimed range. Sanehiro also does not disclose a specific data point or example that falls within the claimed range. *See Atofina*, 441 F.3d at 1000 (“the disclosure of a range . . . does not constitute a specific disclosure of the endpoints of that range”).

Moreover, given the considerable difference between the claimed range of 1.9 μm or smaller and the prior art range of 0.1 to 30 μm , the Examiner has failed to direct us to persuasive evidence in the record or provide adequate technical reasoning as to why the claimed narrow range is disclosed with sufficient specificity in Sanehiro such that a reasonable fact finder could conclude that the prior art anticipates the claim. *Atofina*, 441 F.3d at 999.

The Examiner’s assertions that “the teaching on the particle size range of Sanehiro et al. has ‘sufficient specificity’ relating the particle size range being claimed” (Ans. 7) and “the teaching of a prior art is not limited in the

working example of a prior art” (*id.* at 8) are conclusory and, without more, insufficient to sustain the Examiner’s rejection. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (explaining rejections “cannot be sustained by mere conclusory statements”).

We, therefore, do not sustain the Examiner’s determination that Sanehiro discloses a resin composition satisfying all of the limitations of claim 1 and anticipates the claim. Because claims 2–19 depend from claim 1, we also do not sustain the Examiner’s rejection of those claims.

Accordingly, we reverse the Examiner’s rejection of claims 1–19 under pre-AIA 35 U.S.C. § 102(b) as being anticipated by Sanehiro.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–19	102(b)	Sanehiro		1–19

REVERSED