The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN P. DISMUKES,
JACK W. JOHNSON,
EDWARD W. CORCORAN, JR., and
JOSEPH VALLONE

Appeal No. 2001-0233
Application 08/668,640

ON BRIEF

Before OWENS, WALTZ, and MOORE, Administrative Patent Judges.

MOORE, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1-12, 14, 15, 36, and 37, all of the claims pending in this application. Claims 13 and 16-35 have been canceled.

CLAIMS

Claim 1 is representative of the claims on appeal, and reads as follows:

1. A preceramic composite intermediate composition consisting essentially of a mixture of greater than 30 parts by weight of a ceramic precursor oligomer or polymer

having a number average molecular weight in the range of from about 200 to about 100,000 g/mole having uniformly dispersed therein less than 70 parts by weight of a particulate material selected from the group consisting of: i) non-silicon containing ceramics, ii) carbon, and iii) oxides, hydroxides, or sulfides of elements from Periodic Table Groups II, III, IV, V, VI, VII, or VIII having a decomposition temperature greater than 400°C and mixtures thereof; said particulate material having a mean particle size or mean diameter of less than about 10 microns; whereby the preceramic composite intermediate composition is capable of forming a microporous ceramic product having a surface area in excess of $50m^2/gm$ and a volume of micropores greater than about $0.015\ cm^2/gm$.[1]

THE REFERENCES

In rejecting the appealed claims under 35 U.S.C. § 103, the Examiner relies on the following references:

Porte et al. (Porte)	4,722,988	Feb. 2, 1988
Nishihara et al. (Nishihara)	4,929,507	May 29, 1990
Ayama et al. (Ayama)	4,937,304	Jun. 26, 1990
Takeuchi et al. (Takeuchi)	4,950,381	Aug. 21, 1990
Beck (Beck I)	5,120,692	Jun. 9, 1992
Beck (Beck II)	5,191,137	Mar. 2, 1993
Takeda et al. (Takeda)	5,393,815	Feb. 28, 1995 (filed Jul. 20, 1993)
Yamamoto et al. (Yamamoto)	5,677,372	Oct. 14. 1997 (filed Dec. 8, 1995)

The Appellants rely upon the following reference as evidence of nonobviousness:

Dismukes et al. (Dismukes)	5,902,759	May 11, 1999 (filed Jan. 21, 1997)

THE REJECTIONS

Claims 1-4, 6-12, 15, 36, and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takeda, alone or taken with Yamamoto.

[1] The Appellants have elected to group all of the claims together for each rejection. Consequently, we will focus on claim 1 for each rejection as it is the broadest, and only independent, claim. Claims must be argued separately on appeal or they stand or fall together. See, e.g., In re Dance, 160 F.3d 1339, 1340, 48 USPQ2d 1635, 1636 (Fed. Cir. 1998).

Claims 1-4, 7-9, 12, 14, 15, 36, and 37 stand rejected under 35 U.S.C § 103(a) as being unpatentable over Beck II or Beck I in view of Porte, Takeuchi, or Ayama.

Claims 1, 2, 4-9, 12, 14, 36 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishihara.

DISCUSSION

The Invention

The Appellants' invention relates generally to a preceramic composite intermediate composition consisting essentially of a mixture of a ceramic precursor and a non-silicon containing particulate material having a decomposition temperature greater than 400°C. The mixture has greater than 30 parts ceramic precursor and less than 70 parts particulate material, uniformly dispersed. Finally, the mean diameter of the particulate material is less than 10 microns, the composition itself being "capable of" forming a microporous ceramic product having a surface area in excess of 50 square meters per gram, and a volume of micropores greater than about 0.015 square centimeters per gram.[2] (Appeal Brief, page 2, lines 10-21).

The Rejection of Claims 1-4, 6-12, 15, 36 and 37 Under 35 U.S.C. § 103(a) over Takeda, alone or taken with Yamamoto[3]

The Examiner has found that Takeda discloses a composition including (i) oxidatively resistive organo silicon polymers (the claimed ceramic precursor

[2] We question the accuracy of this statement as recited in the Appeal Brief and claim 1 appended thereto, as volume is measured in cubic centimeters (cm^3).

[3] The Appellants challenge the applicability of several of the prior art references including Takeda under 35 U.S.C. § 103, stating that the filing date of their application precedes the issue date of the references. It is well settled law that, where a reference is available under 35 USC § 102(e), it is also available under 35 U.S.C. § 103. See Hazeltine Research, Inc. v. Brenner, 382 U.S. 252, 147 USPQ 429 (1965). Therefore, these references are available as prior art. Each of the applied references in question has a filing date which antedates the Appellants' earliest claim of priority.

polymers) including polycarbosilane and polysilazanes having a number average molecular weight of 500 - 5000; (ii) 5-50% of a silazane and (iii) 10-70% of an inorganic powder (the claimed particulate material) such as alumina, boron nitride, or aluminum silicate having a mean particle size of 0.1 to 30 microns (preferably 1-5 microns). The composition of Takeda is said to be resistant to high temperatures above 400°C. (Examiner's Answer, page 4, lines 11-18).

The Examiner notes that Takeda discloses satisfactory electrical insulation properties are unobtainable in the absence of the silazane component and consequently it would have been obvious to exclude this component if a high thermal resistance is not required. (Examiner's Answer, page 5, lines 1-4).

In comparing Takeda with the instantly claimed invention, the Appellants first state that one of ordinary skill in the art would view Takeda as teaching away from the invention because the final ceramic product formed from the present invention is a porous material, and would not be desirable in the dense impervious coating of Takeda. (Appeal Brief, page 20, lines 10-18). This argument is unpersuasive, as the instant claims are directed to a composition, not the final product, and Takeda suggests the same composition.

We give claims undergoing examination their broadest reasonable construction consistent with the specification. See Burlington Indus. v. Quigg, 822 F.2d 1581, 1583, 3 USPQ2d 1436, 1438 (Fed. Cir. 1987); In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). All that is required by the instant claims is that the composition (a mixture) be created whereby it is "capable of" forming the desired end product. The specification notes that the formation of the end product having a given

area and volume depends upon, inter alia, mean particle size (Specification, page 8, line 14), relative amounts of ceramic precursor and particulate material (Specification, page 9, lines 6-9), and final heating temperature (Specification, page 12, lines 19-23). Thus, any mixture which meets the claimed mixture elements is deemed “capable of” forming an end product having the recited properties.

The Appellants next correctly note that Takeda regards the silazane component as “essential” to the invention. (Appeal Brief, page 20, lines 19 - 24). However, we remind the appellants that all of the disclosures of a prior art reference, including non-preferred embodiments, must be considered for what they fairly teach one of ordinary skill in the art. Merck & Co. Inc. v. Biocraft Labs. Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). Takeda explicitly teaches that less than 5% by weight of the silazane would sometimes fail to provide electrical insulation (column 6, lines 50 - 52) and the composition preferably contains from 5-40% by weight silazane (column 6, lines 47-48). These statements, while preferring the presence of silazane, do not teach its mandatory presence. We note that comparative Examples 1 and 2 (see column 10) clearly evidence the absence of silazane for the purposes of comparison, producing functional, if not preferred compositions.

Additionally, the Appellants assert that claim 1 is written in “consisting essentially of” language and therefore excludes an organic silicon polymer. (Reply Brief, page 2, lines 6-10). Typically, "consisting essentially of" precedes a list of ingredients in a composition claim or a series of steps in a process claim. By using the term "consisting essentially of," the drafter signals that the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and

novel properties of the invention. A "consisting essentially of" claim occupies a middle ground between closed claims that are written in a "consisting of" format and fully open claims that are drafted in a "comprising" format. PPG Indus. v. Guardian Indus. Corp., 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998) citing Ex parte Davis, 80 USPQ 448, 449-50 (Pat. Off. Bd. App. 1948); Manual of Patent Examining Procedure § 2111.03 (6th ed. 1997).

To determine the components included versus excluded by this language, the claim must be read in light of the specification. In re Janakirama-Rao, 317 F.2d 951, 954, 137 USPQ 893, 896 (CCPA 1963); In re Herz, 537 F.2d 549, 551, 190 USPQ 461, 463 (CCPA 1976). In this regard, we emphasize that, from our perspective, it is an applicant's burden to establish that a component in a prior art method is excluded from his claims by "consisting essentially of" language. See Id., 537 F.2d at 551-552, 190 USPQ at 463 ("[A]n applicant who has not clearly limited his claims is in a weak position to assert a narrow construction" and "[t]here is no evidence that . . . [the prior art] dispersant would materially affect the basic and novel characteristic of . . . [the claimed] composition"). Also see Ziegler v. Phillips Petroleum Co., 483 F.2d 858, 878, 177 USPQ 481, 494 (5th Cir.), cert. denied, 414 U.S. 1079 (1973) ("In the absence of any evidence that a third component was being excluded by the 'essentially consisting of' language, we cannot read those words as meaning 'consisting solely of' or 'consisting exclusively of'").

The specification permits, indeed prefers, silicon containing polymers including polysilazanes (Specification, page 5, lines 16-22). Other silicon containing polymers are exemplified at page 2, last paragraph, of the specification. There is no evidence of

record that minor amounts of silazanes or other components would affect the basic and novel characteristic of the claimed composition.

Furthermore, claim 1 notes only that the ceramic precursor oligomer has a molecular weight of a certain amount. It is not restricted to "non-silicon" polymers. Indeed, the appellants' own dependent claims expressly claim such polymers (claim 4, polycarbosilane; claim 5, polysilastyrene). Non-silicon containing ceramics limits only one category of the particulate material in claim 1. As before, we give the claim language its broadest reasonable interpretation. The plain language of the independent claim and the dependent claims undercuts the appellants' argument. Consequently, as the appellants have failed to carry the burden of explaining how the language "consisting essentially of" excludes the organic silicon polymers of Takeda, and the appellants' own claims are contrary to this argument, we remain unpersuaded.

The Appellants next argue that the present invention requires the inorganic powder to have a particle size to be less than ten microns while Takeda teaches that "particle size is not critical and being from 1 to 30 microns" (Appeal Brief, page 20, lines 22-27; see also Reply Brief, page 2, lines 1-3). While this statement of the Appellants is true, in the same sentence Takeda also states that the inorganic powder is more preferably from 1 to 5 microns, which is within the claimed range. Consequently we find that this argument is also unpersuasive.

We agree with the Examiner that one of ordinary skill in the art would have regarded the omission of silazane and the selection of the inorganic powder particle size as obvious given the disclosure of Takeda cited above, including the comparative

examples. We therefore conclude that the Examiner has put forth substantial evidence to support a prima facie case of obviousness.

The Rejection of Claims 1-4, 7-9, 12, 14, 15, 36, and 37 under 35 U.S.C § 103(a) over Beck I or Beck II in view of Porte, Takeuchi, or Ayama

The Examiner has found that Beck I teaches compositions manifesting ceramic properties which comprise a molecular sieve onto which is coated a thermal decomposable resin such as polysilane. Optional non-oxide ceramics such as aluminum nitride or titanium boride, or clays, silica, or other metal oxides such as alumina may be present. Takeuchi, Ayama, and Beck are said to disclose that polysilazane and polycarbosilanes have the claimed number average molecular weights. (Examiner's Answer, page 7, line 14 - page 8, line 11).

The Appellants make multiple arguments, including:

(1) that there is no motivation to combine these references, as none of the references suggest combining the zeolite of Beck with the polycarbosilanes or polysilazanes of the other references (Appeal Brief, page 11, lines 3-23);

(2) that there is no reasonable expectation of success (Appeal Brief, page 11, line 24 et seq.); and

(3) that there is no disclosure in the prior art of:

(i) the ratio of particulate material to ceramic precursor,

(ii) the size and decomposition temperature of the particulate material,

(iii) the uniform dispersion of the particulate material in the ceramic precursor;

(iv) the specific ceramic precursor, and

(v) the specific particulate material used (Appeal Brief, page 10, lines 18-22).

While we disagree with the contentions of points (1), (2), (3)(i), (3)(iii), (3)(iv), and (3)(v), we find that point (3)(ii) is persuasive and will therefore reverse this rejection. We note that Beck teaches that the molecular sieve can be shaped into a wide variety of particle sizes such as a powder or extrudate which is retained on a 400 mesh screen (Beck I, column 4, lines 63-68; Beck II, column 5, lines 3-8) which the examiner has found equates generally to about 55 microns (Final Rejection, Paper No. 21, page 3, lines 6-7). This general teaching, the Examiner has concluded, is a preferred suggested range and the selection of size and number of pores would have been obvious based upon the degree of porosity sought (Final Rejection, page 3, lines 7-11).

Unlike the Examiner, we are unable to equate a particle size of 55 microns (or greater) to a particle size of less than 10 microns. The teaching of both Beck references is that the particles may pass through a 2 mesh (tyler) screen and be retained on a 400 mesh (Tyler) screen (Beck I, column 4, lines 67-68), which is a substantial departure from a “mean particle size or mean diameter of less than about 10 microns” (claim 1).

The Examiner’s justification for this departure is absent from the Examiner’s Answer and is found only in the Final Rejection (Paper No. 21) as follows:

> The alleged criticality in the quantity of particulate material, as well as its size, being on the order of 10 microns at most is not suggested by Beck’s 2-450 [sic] Tyler mesh size range which corresponds to minmally [sic-minimally] about 55 microns. It must be viewed in the context of its being couched in “Generally speaking” terms and thus clearly is only a preferred suggested range. The size and number of pores would be obviously contingent upon the degree of porosity sought which in turn would depend on the end use. No great deal of ingenuity is seen in making such determination. (Paper #21, page 3, paragraph #5).

The Examiner has failed to point out where one of ordinary skill in the art may find the suggestion for departing so significantly from this suggested and disclosed range.

We are cognizant of the Examiner's contention that it would be contingent upon the degree of porosity sought. But the only porosity discussed in the Beck references refers to the porosity of the zeolite (Beck I, column 1, lines 13-26) or an optional porous matrix material such as silica-alumina (column 5, lines 44-51). Further, Beck discusses the particle size in the context only of the powder, granule, or molded particle (Beck I, column 4, lines 63-68).

The claimed subject matter refers to the porosity of the ceramic produced from the mixture, not the porosity of the components themselves. While it may indeed be the case that the porosity of the final ceramic is known to be affected by the particle size of its constituents, the Examiner still bears the burden of providing sufficient motivation for departing from the disclosed range in the reference to arrive at the claimed subject matter. This she has not done. Consequently, we are constrained to reverse this rejection.

The Rejection of Claims 1, 2, 4-9, 12, 14, 36, and 37 under 35 U.SC. § 103(a) over Nishihara

The Examiner has found that Nishihara discloses a polycarbosilane having a number average molecular weight of 400-50,000 in admixture with an inorganic filler in the concentration ranges of the claims. The mixture is subsequently sintered and has an ultrafine particle network. (Examiner's Answer, page 9, lines 1-7). The particles are presumed to have a size on the order of 10 microns as the coating would otherwise not have a smooth finish (Examiner's Answer, page 10, lines 1-2).

The Appellants first challenge both the suggestion or motivation to combine the inorganic filler with polymetallocarbosilane in the proportions and in the particle size or as dispersed as claimed, and whether a reasonable expectation of success exists. The thrust of this argument is that Nishihara's goal is the production of a dense protective layer, and modifying it in the manner of the instant claims "may" render Nishihara unsuitable for its intended purpose. (Appeal Brief, page 15, lines 1-24).

We disagree with the Appellants contentions regarding motivation and reasonable expectation of success. As we have noted above, the instant claim under review (claim 1) is directed to a composition containing a mixture of two components, not the end use. Nishihara includes a range of proportions, which is inclusive of the appellants' range.

The Appellants make five additional distinctions between Nishihara and the claims. First, it is argued that Nishihara teaches a percentage of particulate matter being between 10 and 90, not less than 70. Second, that Nishihara does not teach a particle size while the claim is limited to a particle size of less than ten microns. Third, that Nishihara does not teach uniform dispersion of particulate material, and fourth, that Nishihara requires the use of an organic solvent. The Appellants do, however, acknowledge that the instant specification teaches the use of an organic solvent to disperse the particulate material in an intermediate composition (Appeal Brief, page 13, line 9 - page 14, line 5; Reply Brief page 6, lines 4-9). Finally, in the Reply Brief, the Appellants state as a fifth argument that Nishihara provides for an optional silicon resin which is excluded by the instant claims by the use of the "consisting essentially of" transitional phrase. (Reply Brief, page 6, lines 12-16)

As we find the second contention persuasive, we reverse. Claim 1 requires the particulate material to have a mean particle size or mean diameter of less than about 10 microns. (Claim 1, lines 8-10). The Examiner has admitted that Nishihara does not disclose a particle size, but states "however, the filler's thickness would not be expected to exceed that of the resin. Since a paint so formulated can be coated on in multiple coating steps and the thickness may be on the order of 30 microns (Example 4 in column 5), it is plausible to presume that the filler particles may have particle size dimensions on the order of 1/3 that thickness for the purpose of a smooth finish." (Examiner's Answer, page 9, line 16, page 10, line 2).

We disagree with the Examiner's interpretation of this reference. Example 4 (Nishihara, column 5, line 55 et seq.) teaches a single-step coating which coating reaches a thickness of 30 microns. It says nothing about surface smoothness, particle sizes, or the number of coats to apply. We, therefore, do not read Example 4 as suggesting or teaching a particle size of 10 microns. Consequently, we reverse this rejection.

Rebuttal Evidence

While the arguments presented do not expressly term the evidence of record as "rebuttal" evidence, we will nonetheless review this evidence as both rebuttal evidence, and evidence put forth to show the criticality of the claimed ranges.

The Appellants, throughout their Briefs, argue that the mean diameter of the particle size is critical (see, e.g., Appeal Brief, page 6, lines 1 et seq.). The Appellants assert, by pointing to data within commonly owned U.S. Patent No. 5,902,759 ('759 patent), and data contained within the instant specification, that they have demonstrated

that criticality (Reply Brief, page 2, lines 10 et seq.). The Examiner, on the other hand, has put forth a prima facie case of obviousness vis-à-vis Takeda alone. The Examiner further remains unpersuaded by the evidence, noting that the instant claims preclude the presence of materials which are initially silicon containing, while the '759 patent urged as evidence requires them. Further, the Examiner challenges the correspondence between the materials of the '759 patent and the instant claims. Finally, as regards the instant specification, the Examiner asserts that no criticality is established for quantity or particle size (See, generally, the Examiner's Answer, page 5, line 10 – page 6, line 15).

We note that it is not inventive to discover optimum or workable ranges by routine experimentation, and appellants have the burden of proving any criticality. In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 218-19 (CCPA 1980); In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). There are certain elements of this burden which must be met once a prima facie case of obviousness has been established.

First, we note that appellants must show that the claimed range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). Second, one relying on data to establish unexpected results has a burden of establishing that unexpected results are actually obtained and the significance of those results to one having ordinary skill in the art. Cf. In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972) (inventor must show that the results claimed to be obtained with a claimed invention are actually obtained with the invention). Third, in order to establish unexpected results for a claimed invention, objective evidence of

nonobviousness must be commensurate in scope with the claims which the evidence is offered to support. In re Clemens, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980); In re Greenfield, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978).

The proposed evidence is defective in a plurality of ways and fails to establish either criticality of the claimed ranges or provide sufficient evidence of unexpected results to rebut the prima facie case of obviousness.

First, the evidence in the specification has not been explained in any meaningful way which would tend to support a finding of criticality of the claimed ranges (or, for that matter, as evidence of nonobviousness as unexpected results). The sole explanation is found on page 2, line 15 to page 3, line 1 of the Reply Brief. In this explanation, it is urged that:

> First, Appellants point to the '759 patent, column 9, line 55 to column 10, line 34 and column 11, lines 5-43 where the effect of the particle size and ratio is clearly shown. Second, Appellants point to tables 1-5 on pages 14-18 of the instant application which show the micropore volume and surface area results obtained using the instant invention. Appellants assert that simple logic dictates that since these results correlate with those in the '759 and all the components of the two compositions are the same except the type of particulate material (i.e., silicon versus non-silicon containing), then, one skilled in the art would realize that the effect of said particulate material is the same in the instant invention as it was in the '759 patent. Hence, there is parallel performance in that both the '759 patent and the instant invention produce a microporous ceramic product having a surprisingly high surface area and micropore volume (see claim 1 of instant invention, last three lines).

We, like the Examiner, are unpersuaded by this argument. First, attorney argument regarding "simple logic" and "parallel performance" is not evidence. Second, the specification itself notes that "another factor which influences both surface area and the degree of microporosity which can be achieved in the microporous ceramic is the final temperature to which the ceramic is heated" (Specification, page 12, lines 19-23).

No control experiments are evident in the experiment to negate the impact of temperature.

Third, the data in the specification itself appears only to show that the surface area and micropore volume present in the resulting ceramic product tends to vary inversely as a function of the maximum pyrolysis temperature (Table 1, page 14); Table 2 (Page 16) appears to vary only the particulate material type, and is otherwise unexplained; Table 3 (Page 17) also appears to vary only the particulate material type, and is unexplained. Table 4 (page 18) does appear to demonstrate that 0.5 μm Al_2O_3 has a greater micropore volume than 1.6 micrometer AlN. The significance of this, however, is unexplained. Is it the mean particle diameter which causes this effect, or the change in material? Table 5 (page 18) is also not persuasive. The results are wholly unexplained, and appear to be supporting a decomposition in ammonia. Thus, the showing in the specification does not support a finding of criticality of the claimed ranges.

Turning now to the patent cited in support of patentability of the instant application, we find that it can hardly be said to be commensurate in scope with the degree of patent protection sought. In re Kulling, 897 F.2d 1147, 1149, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); In re Dill, 604 F.2d 1356, 1361, 202 USPQ 805, 808 (CCPA 1979).

The Appellants point us to column 9, line 55 to column 10, line 34, and column 11, lines 5-43 of the ‘759 patent as showing the effect of particle size and ratio (Reply Brief, page 2, lines 15-17). Examples 10-12 of the ‘759 patent mix treated NCP100 polysilazane and treated NCP-200 polysilazane, grinding them to <1 micron, 10

microns, and 50 microns. First, we observe that the composition of Examples 10-12 of the '759 patent does not fall within the scope of the instant claims. We do not accept the attorney argument that they are logically connected or parallel processes. Second, we observe that the three data points (<1, 10, and 50 microns) are hardly representative of the claimed range.

Because the relied upon evidentiary showing is insufficient, there is nothing to substantiate the appellants' allegation that the criticality of the claimed range has been established. Further, "naked attorney argument is 'insufficient to establish unexpected results.'" In re Geisler, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997) (quoting In re Soni, 54 F.3d 746, 750, 34 USPQ2d 1684, 1687 (Fed. Cir. 1995)).

Consequently, the prima facie case of obviousness over Takeda is not rebutted.

Summary of Decision

The rejection of claims 1-4, 6-12, 15, 36 and 37 under 35 U.S.C. § 103(a) as unpatentable over Takeda alone or taken with Yamamoto is sustained.

The rejection of claims 1-4, 7-9, 12, 14, 15, 36, and 37 under 35 U.S.C § 103(a) as being unpatentable over Beck II or Beck I in view of Porte, Takeuchi, or Ayama is reversed.

The rejection of claims 1, 2, 4-9, 12, 14, 36, and 37 under 35 U.S.C. § 103(a) as being unpatentable over Nishihara is reversed.

Time Period for Response

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

TERRY J. OWENS Administrative Patent Judge	) BOARD OF PATENT
THOMAS A. WALTZ Administrative Patent Judge	) APPEALS AND
JAMES T. MOORE Administrative Patent Judge	) INTERFERENCES

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