UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CONSTANTIN C. STANCU, and SILVA HITI

Appeal 2008-2660
Application 09/973,685
Technology Center 2800

Decided: September 24, 2008

Before KENNETH W. HAIRSTON, ROBERT E. NAPPI, and KEVIN F. TURNER, *Administrative Patent Judges.*

NAPPI, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 6(b) of the final rejection of claims 1 through 6 and 8 through 12.[1]

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[1] We note that on page 1 of the Brief, Appellants state that claim 5 has been canceled and rewritten as claim 14. The Appendix to the Brief includes claim 14, and not claim 5. Further, the Examiner's Answer identifies claim 14 as rejected and does not address claim 5. However, no formal amendment, under 37 C.F.R. 37 C.F.R. § 1.121 has been made to cancel claim 5 and add new claim 14. As neither claim 5 nor 14 is specifically argued to be separately patentable, and they are grouped with claim 1, we will consider this appeal, as the error does not impact our decision.

We affirm the Examiner's rejection of these claims.

INVENTION

The invention is directed to a method of controlling a surface mounted permanent magnet motor. The method involves controlling the d-axis and q-axis current components. See pages 2 and 3 of Appellants' Specification. Claim 6 is representative of the invention and reproduced below:

> 6. A method of controlling an electric motor comprising:
> providing an electric motor having a wound stator, a rotor magnetically coupled to said wound stator, said rotor including surface mount permanent magnets;
> controlling q-axis current in the stator;
> controlling d-axis current in the stator;
> magnetically saturating the rotor; and
> wherein the step of controlling the q-axis current in the stator comprises controlling the q-axis current as a function of the angle **β.**

REFERENCES

Nagate	US 5,864,192	Jan. 26, 1999
Obara	US 5,920,161	Jul. 6, 1999
Iijima	US 5,936,378	Aug. 10, 1999

REJECTIONS AT ISSUE

Claims 1 through 6, and 8 through 12[2] stand rejected under 35 U.S.C. § 103(a) as being unpatenable over Iijima in view of Nagate. The Examiner's rejection is on pages 3 through 5 of the Answer.

Nonetheless, Appellants and Examiner should ensure that the requirements of 37 C.F.R. § 1.121 are met.

[2] See Fn.1.

Throughout the opinion, we make reference to the Brief (received June 25, 2007), Reply Brief (received April 5, 2006) and the Answer (mailed July 24, 2007) for the respective details thereof.

ISSUES

Appellants argue on pages 8 through 10 of the Brief that the Examiner's rejection of claims 1 through 6, and 8 through 12 is in error. Appellants reason on pages 8 and 9 of the Brief that Iijima is silent and teaches away from controlling the d-axis or q-axis components as a function of β. On page 9 and 10 of the Brief, Appellants argue that Nagate similarly does not teach controlling the d-axis or q-axis components as a function of β. Further, Appellants argue that Nagate generates magnetic saturation by high energy magnets and not by controlling the d and q axis currents as disclosed.

Thus, Appellants' contentions present us with two issues. First, whether the Examiner erred in determining that the combination of the references teaches d-axis or q-axis components as a function of β. Second, whether the Examiner erred in determining that the combination of the references teaches saturation in the motor as claimed.

PRINCIPLES OF LAW

Office personnel must rely on Appellant's disclosure to properly determine the meaning of the terms used in the claims. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc). "[I]nterpreting what is *meant* by a word *in* a claim 'is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.'" *In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1348, (emphasis in original) (citing *Intervet Am., Inc. v. Kee-Vet Labs., Inc.*, 887 F.2d 1050, 1053 (Fed. Cir. 1989)).

37 C.F.R. § 41.37 (c)(1)(vii) states:

> For each ground of rejection applying to two or more claims, the claims may be argued separately or as a group. When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone. Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately…. A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.

FINDINGS OF FACT

1. Iijima teaches a motor controller for supplying power to the stator windings of the motor. The controller includes a unit that determines the saturation degree of the motor. Abstract.

2. Iijima's controller includes a current command production unit (item 50), which generates command Id current (Id*) and command Iq current (Iq*). Figure 1 and col. 8, ll. 8-14.

3. The flow chart of Figure 2 depicts the operation of current command production unit. Col. 6, ll. 18-19.

4. In step 114 the command Id current is a function of the prior Id command and a gain (Gai) multiplied by the difference between the saturation and a reference value. Col. 8, ll. 5-12, equation 8, and Figure 2.

5. The command Iq is determined by different formulas depending upon the operating condition of the motor. See step 116 of Figure 2.

6. When the motor is in the coasting and regenerating operation, the command Iq is calculated to be the current index times the cos β. Col. 11, 52-54, and step 120 of Figure 2.

7. The saturation degree (Sat) is determined by the saturation degree production unit (item 20) and the gain (Gai) is determined based upon the gain production unit 40. Col. 7, ll. 59-60, col. 8, ll. 4-7, and Figure 1.

8. The gain (Gai) is calculated using different formulas depending upon the relationship between the command phase β and the phase β. Thus, Gai is a function of phase B. Col 16, l. 42 through col. 17, ll. 11, see also figure 9.

ANALYSIS

Appellants' arguments have not persuaded us of error in the Examiner's rejection of claims 1 through 6, and 8 through 12. Initially, we note that on page 7 of the Brief, in a paragraph titled "Grouping of Claims" Appellants state that the claims are grouped into seven groups. In this paragraph, Appellants identify differences in the groups of the claims. We consider these to be merely statements as to what the claims recite, and not a separate argument directed to the separate patentability of the claims. 37 C.F.R. § 41.37 (c)(1)(vii) identifies "[a] statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim." The section in Appellants' brief, titled "VIII ARGUMENT" does not provide separate arguments which individually address the claims, as such Appellants' arguments have grouped claims 1 through 6, and 8 through 12 together. We select claim 6 as representative of the group.

Appellants' arguments have not persuaded us that the Examiner erred in rejecting claim 6.[3] Claim 6 recites a method of controlling an electric motor that includes steps of "controlling q-axis current in the stator; controlling d-axis current in the stator" and "wherein the step of controlling the q-axis current in the stator comprises controlling the q-axis current as a

[3] We note that the Examiner's response to Appellants' arguments discuss claim 1, which includes limitation directed to controlling d-axis as a function of β. While we do not disagree with the Examiner's findings with regard to the d-axis (facts 4 and 8) we choose claim 6 as representative as the relationship between iq and β is more clearly explained.

function of the angle β." We find that Iijima teaches a motor controller which generates a d-axis current command (i.e. controls the d-axis current) and a q-axis current command (i.e. controls the q-axis current). Fact 2. Further, contrary to Appellants' arguments on page 8 of the Brief we do not find that Iijima is silent as to controlling the q-axis current as a function of β, rather we find that Iijima expressly identifies that the q axis current control value is to be calculated based upon the cos of β. Fact 6. Thus, Appellants' arguments have not persuaded us that the Examiner erred in determining that the combination of the references teaches d-axis or q-axis components as a function of β.

Similarly, we are not persuaded that the Examiner erred in determining that the combination of the references teaches saturation in the motor as claimed. Claim 6 recites "magnetically saturating the rotor" of the motor. Claim 6 recites no limitations as to how the rotor is saturated, while Appellants' Specification may discuss such operation, we decline to import such limitations to the claim. Thus, it is not material to the rejection whether the rotor is magnetically saturated by magnets in the rotor or by the controlled d-axis current and q-axis current. We find that Iijima teaches that the rotor is saturated and that the degree of saturation is used in determining the command Id current. Fact 4. Thus, Appellants' arguments have not persuaded us of error in the Examiner's rejection of claim 6. As discussed above, Appellants' arguments have grouped claims 1 through 6, and 8 through 12. Accordingly, we sustain the Examiner's rejection of claims 1 through 6, and 8 through 12.

CONCLUSION

For the foregoing reasons, we sustain the Examiner's rejection of claims 1 through 6, and 8 through 12 under 35 U.S.C. § 103(a).

ORDER

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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