THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JERRY D. ROBICHAUX and BRADLEY J. HIEB

Appeal No. 97-0755
Application No. 08/400,066[1]

ON BRIEF

Before ABRAMS, NASE, and CRAWFORD, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 11 and 13 through 18, which are all of the claims pending in this application.

---

[1] Application for patent filed March 7, 1995.

We AFFIRM-IN-PART.

BACKGROUND

The appellants' invention relates to a system and method for mode selection in a variable displacement engine. An understanding of the invention can be derived from a reading of exemplary claims 11 and 14, which appear in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner as evidence of anticipation under 35 U.S.C. § 102 and obviousness under 35 U.S.C. § 103 are:

Ishii	5,038,739	Aug. 13, 1991
Lipinski et al. (Lipinski)	5,408,974	Apr. 25, 1995 (filed Dec. 23, 1993)

Claims 11 and 13 through 18 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to provide an adequate written description of the invention.

Claims 11 and 14 through 16 and 18 stand rejected under

35 U.S.C. § 102(a)/(e) as being anticipated by Lipinski.

Claim 17 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lipinski in view of Ishii.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the final rejection (Paper No. 7, mailed November 18, 1995) and the examiner's answer (Paper No. 14, mailed July 30, 1996) for the examiner's complete reasoning in support of the rejections, and to the appellants' brief (Paper No. 13, filed July 1, 1996) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The written description issue

We do not sustain the examiner's rejection of claims 11 and 13 through 18 under 35 U.S.C. § 112, first paragraph, as failing to provide an adequate written description of the invention.

The description requirement exists in the first paragraph of 35 U.S.C. § 112 independent of the enablement (how to make and how to use) requirement.[2] The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. See Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1116-17

[2] It is well settled that the description and enablement requirements are separate and distinct from one another and have different tests. See In re Wilder, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984); In re Barker, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977); and In re Moore, 439 F.2d 1232, 1235-36, 169 USPQ 236, 239 (CCPA 1971).

(Fed. Cir. 1991) and In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

The examiner's basis for this rejection (final rejection, p. 2) is that "no where in the specification is there even an example on the apparatus/equations necessary to determine this vacuum" (i.e., the inferred desired fractional manifold vacuum) and that the "examiner does not consider inferred desired fractional manifold vacuum a term in the art."

The appellants argue (brief, pp. 2-3) that this rejection is not sustainable since the appellants are allowed to be their own lexicographers and the term "inferred desired fractional manifold vacuum" is defined at pages 5-6. We agree. A rejection on the description requirement is tantamount to a new matter rejection. Both are fully defeated by a specification which describes the invention in the same terms as the claims. See In re Bowen, 492 F.2d 859, 864, 181 USPQ 48, 52 (CCPA 1974). Since the appellants' specification at pages 5-6 describes the "inferred desired fractional manifold vacuum" in the same terms as used in the claims, we

reverse the examiner's rejection based upon the written description requirement in the first paragraph of 35 U.S.C. § 112.

To the extent that the examiner intended[3] by stating that the specification does not include an example on the apparatus/equations necessary to determine an inferred desired fractional manifold vacuum to make a rejection based upon the enablement requirement[4] in the first paragraph of 35 U.S.C. § 112, we note only that, in our opinion, the examiner has not met his burden of proof by advancing acceptable reasoning inconsistent with enablement. In order to make a rejection, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed

---

[3] See the first two paragraphs of the examiner's response to argument set forth in the answer.

[4] The test for enablement is whether one skilled in the art could make and use the claimed invention from the disclosure coupled with information known in the art without undue experimentation. See United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), cert. denied, 109 S.Ct. 1954 (1989); In re Stephens, 529 F.2d 1343, 1345, 188 USPQ 659, 661 (CCPA 1976).

invention. See In re Wright, 999 F.2d 1557, 1561-62, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure). A disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. § 112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. See In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

The prior art issues

We sustain the examiner's rejection of claim 14[5] under 35 U.S.C. § 102(a)/(e) as being anticipated by Lipinski.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

---

[5] In accordance with 37 CFR § 1.192(c)(7), we have selected claim 14 from the appellants' grouping of claims (brief, p. 2) to decide the appeal on this rejection under 35 U.S.C. § 102.

Claim 14 is drawn to an apparatus for determining the number of cylinders to operate in a variable displacement engine. The apparatus comprises, inter alia, an engine speed sensor and a processor coupled to said engine speed sensor for determining whether the variable displacement engine should be operated on a fractional number of cylinders. Claim 14 further recites that the processor (1) infers a desired fractional manifold vacuum representative of as amount of vacuum required to accommodate the desired torque and the specific emissions calibration for the variable displacement engine operating on a fractional number of cylinders, (2) stores recommendations for the number of cylinders to operate in the variable displacement engine based on the present engine speed and the inferred desired fractional manifold vacuum, and (3) generates a present operating mode recommendation reflective of the present engine speed and the inferred desired fractional manifold vacuum.

Lipinski discloses a system for selecting the number of cylinders to be operated in a multi-cylinder variable displacement internal combustion engine. As shown in Figure

1, Lipinski's system includes microprocessor controller 10 of the type commonly used for providing engine control. Lipinski teaches that controller 10 contains a microprocessor 10A, which uses a variety of inputs from accelerator control position sensor 14, engine speed sensor 16, vehicle speed sensor 18, and various sensors 12. The sensors 12 may include engine coolant temperature, air charge temperature, engine mass air flow, intake manifold pressure, and other sensors known to those skilled in the art. The controller 10 may operate spark timing control, air/fuel ratio control, exhaust gas recirculation (EGR), and other engine and power transmission functions. In addition, through a plurality of engine cylinder operators 20, controller 10 has the capability of disabling the selected cylinders in the engine so as to cause the engine to have a decreased effective displacement. For example, with an 8-cylinder engine, the engine may be operated on 4, 5, 6 or 7 cylinders, or even 3 cylinders, as required.

Figure 2 of Lipinski is an engine operation map showing fractional and maximum cylinder operation based on inferred

engine load and engine speed. At any particular operating point, accelerator control position sensor 14 transmits to controller 10 information which is transformed into an accelerator control position signal indicating the position of the accelerator control. The position of the accelerator control is used as a reliable indicator of the driver's demand with respect to engine torque or power output. Additionally, as noted above, controller 10 receives information from engine speed sensor 16, which allows controller 10 to operate the engine according to the operation map illustrated in Figure 2.

Figure 4 of Lipinski is a flow diagram illustrating the operation of a variable displacement engine using inferred engine load as a control variable. Lipinski teaches (column, 4 lines 24-55) that

> [i]f vehicle speed is within the control limits of block 102, the routine passes to block 106. At block 106, contemporaneous engine load is inferred from the accelerator position and engine speed. As used herein, the term "load" means volumetric efficiency, which can be measured in terms of intake manifold pressure or inlet air charge. Processor 10A within controller 10 contains stored values for engine load as functions of engine speed and accelerator control position. It has been

> determined that a system according to the present invention may be operated with stored load values for either fractional or maximum operation. Processor 10A also contains stored values for engine load as a function of engine speed at wide open throttle. Processor 10A infers engine load by determining the percentage of wide open throttle engine load corresponding with the engine load demanded by the driver, as indicated by the sensed accelerator control position. The wide open throttle load and the loading governed by the accelerator control are compared at the same engine speed. In effect, processor 10A determines the extent to which the engine is being loaded, up to and including the wide open throttle load. The result of this comparison, which is a fraction having a value less than or equal to one, is entered into one of two look-up tables, with each having two dimensions shown in FIG. 2. The look-up tables have inferred engine load and engine speed as independent variables. The lookup tables correspond to fractional and maximum operation. In block 110, processor 10A compares the values for inferred engine load and engine speed with the table values to determine whether maximum operation or fractional operation is indicated.

In our opinion, claim 14 is anticipated since each and every element set forth in claim 14 is found, either expressly or inherently described, in Lipinski. In that regard, it is our determination that the recitation in claim 14 that the processor infers a desired fractional manifold vacuum "reads on" Lipinski's disclosure of inferring engine load based on the accelerator control position and engine speed. We reach this conclusion based upon the well-known relationship between

engine load and intake manifold pressure set forth by Lipinski at column 4, lines 25-30. Accordingly, it is our determination that an "inferred engine load" is directly proportional to an "inferred desired fractional manifold vacuum." Thus, when one skilled in the art infers the engine load as taught by Lipinski, one is also inherently inferring the desired fractional manifold vacuum.

The appellants' argument (brief, p. 3) that claim 14 is not anticipated by Lipinski is unpersuasive for the following reasons. First, claim 14 "reads on" Lipinski's system as set forth above. Second, while Lipinski infers engine load and therefore also infers desired fractional manifold vacuum from sensing accelerator position, claim 14 does not exclude utilizing the sensed accelerator position in inferring the desired fractional manifold vacuum.

Claims 11 and 15 through 18 have not been separately argued by the appellants. Accordingly, these claims will be treated as falling with claim 14. See In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); In re

Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987); and In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978). Thus, it follows that the examiner's rejection of claims 11 and 15 through 18 is also sustained.

CONCLUSION

To summarize, the decision of the examiner to reject claims 11 and 13 through 18 under 35 U.S.C. § 112, first paragraph, is reversed; the decision of the examiner to reject claims 11, 14 through 16 and 18 under 35 U.S.C. § 102 (a)/(e) is affirmed; and the decision of the examiner to reject claim 17 under 35 U.S.C.
§ 103 is affirmed.

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

NEAL E. ABRAMS Administrative Patent Judge	)
JEFFREY V. NASE Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
MURRIEL E. CRAWFORD Administrative Patent Judge	)

FORD MOTOR COMPANY
J. R. DROUILLARD
SUITE 911 PARKLANE TOWERS EAST
DEARBORN, MI 48126

APPEAL NO. 97-0755 - JUDGE NASE
APPLICATION NO. 08/400,066

APJ NASE

APJ CRAWFORD

APJ ABRAMS

DECISION: **AFFIRMED-IN-PART**

Prepared By: Delores A. Lowe

DRAFT TYPED: 02 Apr 98

FINAL TYPED: