

United States District Court,
E.D. Michigan, Southern Division.

EATON CORPORATION,
Plaintiff.

v.

ZF MERITOR LLC, ArvinMeritor, Inc. and ZF Friedrichshafen AG,
Defendants.

Nov. 14, 2006.

Alan C. Harnisch, Lawrence S. Gadd, Harnisch & Gadd, Bloomfield Hills, MI, John F. Rabena, William H. Mandir, Sughrue, Mion, Washington, DC, Keith P. Schoeneberger, Michael H. King, Spencer R. Wood, Leboeuf, Lamb, Chicago, IL, for Plaintiff.

David D. Murray, Raymond J. Vivacqua, Brinks, Hofer, Ann Arbor, MI, Gary M. Ropski, Thomas J. Filarski, Laura B. Miller, James K. Cleland, Brinks, Hofer, Chicago, IL, for Defendants.

**ORDER REGARDING DEFENDANTS' OBJECTIONS TO SPECIAL MASTER'S REPORT AND
RECOMMENDATION ON CLAIM CONSTRUCTION ISSUES FOR U.S. PATENT 5,624,350**

GEORGE CARAM STEEH, District Judge.

The '350 patent, entitled "Automated Clutch Control and Calibration", relates to method and apparatus for reengaging a clutch in a truck transmission system after the clutch has been disengaged. The essence of the invention is a way to shorten the distance the clutch has to move between events of engagement and disengagement. Defendants object to the Special Master's recommended construction on the basis that it expands the scope of the claim beyond that described and supported by the specification, and that it interjects indefiniteness and ambiguity in the asserted claims because one of ordinary skill in the art is not able to determine their scope and boundary.

The claimed invention purports to improve responsiveness of the clutch during clutch engagement by defining clutch control parameters corresponding to an "approach point" as well as a "touch point". The touch point, also called the point of incipient engagement, is a theoretical point at which the clutch plates just begin to touch. The '350 patent describes touch point as the point "at which the master clutch just beg[ins] to transmit torque." This point cannot be observed directly because the clutch plates are enclosed in a bell housing. In addition, torque transfer cannot be directly measured. The term "touch point" was known to those skilled in the art at the time the '350 patent was issued. There is no agreed upon standard for determining touch point, and different prior art methods produce inconsistent results.

The term "approach point" is not a term of art used by automotive engineers. The '350 specifications state that approach point is not the same point as the touch point. The Special Master's Report states that "the approach point is a point intermediate full disengagement and the touch point, preferably almost to the touch

point." Defendant contends that the approach point is a single point, while the recommended definition encompasses an infinite number of possible approach points, including points that the prior art teaches are touch points. Both experts used illustrations which demonstrate that the same points described in the prior art as a touch point can be an approach point under the recommended definition. Defendants urge the court to reject the recommended definition because the '350 patent teaches that the touch point and approach point must be different points. Rather, defendants invite a claim construction which includes using the algorithm set forth in FIG 4 of the '350 patent for determining the touch point and approach point.

The Special Master specifically addressed defendants' concerns in his Report, emphasizing that limitations in patent specifications are generally not imported into the claims, and that issues of infringement and validity generally are separate from claim construction. The Report concludes that the ' 350 patent sets forth express definitions for approach point and touch point, and such definitions are clear enough so that one skilled in the art can easily understand what is being read in light of the patent specifications. The Special Master notes that the claim construction leaves the claims "broad" as sought by plaintiff, i.e. not limited to the specific calibration technique disclosed in the patent.

The Report goes on to consider the issue of indefiniteness, which would render a claim invalid if those skilled in the art would not understand the scope of the claim when the claim is read in light of the specification. *Amtel Corp. v. Information Storage Devices, Inc.* , 198 F.3d 1374, 1378 (Fed.Cir.1999); *Personalized Media Communications, LLC v. ITC*, 161 F.3d 696, 705 (Fed.Cir.1998). In this case the experts are in direct confrontation about "indefiniteness" and how those skilled in the art would view the matter. The Special Master concludes that under Federal Circuit precedent, such a validity challenge is ripe for consideration at trial. See *LiebelFlarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 911-14 (Fed.Cir.2004).

This court adopts the Special Master's recommended claim construction without modification, as well as the recommendation to deny defendant's motion for summary judgment of invalidity for indefiniteness.

It is so ordered.

JAMES F. DAVIS, Special Master.

SPECIAL MASTER'S REPORT AND RECOMMENDATIONS ON U.S. PATENT 5,624,350: CLAIM CONSTRUCTION ISSUES, AND DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF INVALIDITY

INTRODUCTION

1. In this patent infringement suit, plaintiff Eaton Corporation alleges infringement by defendants, ZF Meritor LLC, ArvinMeritor, Inc and ZF Friedrichshafen AG ("the defendants") of three U.S. patents: No. 4,899,279 ("the '279 patent"); No. 5,624,350 ("the '350 patent"); and No. 5,644,458 ("the '458 patent"). The patents all relate to improvements in automated mechanical transmission ("AMT") systems used in medium and heavy duty trucks.

PROCEDURAL HISTORY

2 (a) By Order of Reference dated March 31, 2006, the Honorable George Caram Steeh, United States District Judge for the Eastern District of Michigan, Southern Division, referred this matter to Special Master

James F. Davis, pursuant to Fed.R.Civ.P. 53. The Order notes the "complexity of the subject matter" and "no objection" by the parties to appointment of a Special Master to deal with "claim construction" issues. The parties briefed the issues and a hearing was held in Washington, D.C. on June 1, 2006. The transcript of the hearing and tutorial materials used at the hearing are not filed herewith but are in the possession of counsel and the Special Master for review by the Court as deemed necessary.

(b) On May 31, 2006, defendants filed a Motion for Summary Judgment of Invalidity Based on Indefiniteness of the '350 patent. By Order dated June 12, 2006, the Court referred defendants' motion to the Special Master. On June 21, 2006, plaintiff filed a Motion for Reconsideration and Clarification of the June 12 Order seeking among other things reversal of the reference of defendants' Motion to the Special Master. On June 28, 2006, the Court denied plaintiff's Motion noting that the Special Master "is authorized to hold evidentiary hearings necessary to resolve motions that have been referred to him".

(c) An evidentiary hearing was held on August 29, 2006 to consider issues relating to defendants' Motion for Summary Judgment of Invalidity for Indefiniteness. The evidence adduced centered on whether "persons skilled in the art" would consider the claims "indefinite" or "ambiguous" within the meaning of applicable law. The transcript of the hearing is not filed herewith but is in the possession of counsel and the Special Master for review by the Court as deemed necessary.

(d) On August 14, 2006, the Special Master filed his report on claim construction issues on the '279 and '458 patents. This present report deals only with the '350 patent.

3. By request of the parties, a draft of this report was submitted to counsel for review and comment. Rule 53, Advisory Committee Notes, 2003 Amendments, Subdivision (f). Defendants submitted comments which were considered in preparing this report.

4. The issues before the Special Master are (i) construction and interpretation of claims of the '350 patent, and (ii) validity of claims of the '350 patent.

THE LAW

5. The law of claim construction, not in dispute, is easily stated but often difficult to apply. Patent claims measure the scope of the patentee's right to exclude and claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed.Cir.1995) *affd.* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Claim terms normally carry their ordinary and customary meaning. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313 (Fed.Cir.2002). The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will usually be the correct construction. *Phillips v. AWH Corp.* 415 F.3d 1303 (Fed.Cir.2005). Claims are read and construed in light of the specification but not limited in scope thereby. *Markman*, *supra*; *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576 (Fed.Cir.1996).

Prosecution history may also be helpful in construing claims. *Vitronics*, *supra*. Prosecution history may limit the interpretation of claims to exclude any interpretation that was disclaimed during prosecution in order to obtain claim allowance. *Southwall Technologies v. Cardinal IG Co.*, 54 F.3d 1570 (Fed.Cir.1995). In most cases, intrinsic evidence alone, i.e. the patent disclosure, the claims and the prosecution history, provides the basis for claim construction and interpretation. *Pall Corp. v. Micron Separation, Inc.*, 66 F.3d 1211 (Fed.Cir.1995). Sometimes there is a fine line between construing claims in light of the specification and

file history and reading limitations of the specification into the claims. *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182 (Fed.Cir.1998). Examples disclosed in a preferred embodiment of an invention may aid in proper claim construction; however claim scope is not ordinarily restricted or limited by such examples. *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299 (Fed.Cir.1997). Where a specification does not require a limitation, that limitation should not be read into the claims. *Specialty Composites v. Cabot Corp.* 845 F.2d 981 (Fed.Cir.1988). However, if a preferred embodiment is described as the invention itself, the claims may not be entitled to a scope greater than the embodiment. *Modine Mfg. Co. v. United States ITC*, 75 F.3d 1545 (Fed.Cir.1996); *Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc. et al.* No. 05-1233, (Fed. Cir. decided May 11, 2006)

Claims are to be construed without reference to an accused infringing device, *Young Dental Mfg. Co. v. Q3 Special Products Corp.*, 112 F.3d 1135 (Fed.Cir.1997), though knowledge of an accused device can sometimes provide helpful context to claim construction. *Lava Trading, Inc. v. Sonic Trading Management, LLC et al*, No. 05-1177,-1192 (Fed.Cir., decided April 19, 2006). Validity issues including indefiniteness and ambiguity are resolved independent of claim construction. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898 (Fed.Cir.2004)

Patents are presumed valid. 35 U.S.C. 282. Invalidity, including for indefiniteness, must be established by clear and convincing evidence. *Intellectual Prop. Dev. Inc. v. UA-Columbia Cablevision of Westchester Inc.* 336 F.3d 1308 (Fed.Cir.2003) The test for adequacy or "definiteness" under 35 U.S.C 112 is whether one skilled in the art would understand all the language in the claims when they are read in light of the specification, as they must be. *Orthokinetics, Inc. Safety Travel Chairs, Inc.*, 806 F.2d 1565 (Fed.Cir.1986); *Rosemount, Inc. v. Beckman Instruments, Inc.* 727 F.2d 1540 (Fed.Cir.1984)

Summary judgment is appropriate when there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law. Fed.R.Civ.P. 56(c); *Anderson v. Liberty Lobby, Inc.* 477 U.S. 242, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). Summary judgment of patent invalidity is not appropriate when there is conflicting expert evidence and where credibility determinations are required. *Teleflex, Incorporated and Technology Holding Company v. KSR International Co* (Fed.Cir. No. 04-1152 decided January 6, 2005) citing *Jones v. Hardy*, 727 F.2d 1524 (Fed.Cir.1984).

THE '350 PATENT

6. The '350 patent entitled "Automated Clutch Control and Calibration" issued April 29, 1997 (application Serial No. 520,360, filed August 28, 1995) claiming priority to a UK application filed in 1994. The application was assigned to plaintiff. Claims 1, 2, 3, 5, 6, 8 and 9 are in issue.

7. The '350 patent relates to method and apparatus for reengaging a clutch in a truck transmission system after the clutch has been disengaged, *e.g.* reengaging after disengagement for a gear change up or down. The essence of the invention is a way to shorten the distance the clutch has to move between events of engagement and disengagement. As stated in the patent (emphasis supplied):

According to the present invention, the responsiveness of vehicular automated master clutch control is improved, as compared to the prior art, by *defining, during calibration operations, a control parameter value corresponding to an "approach point" as well as to the touch point, wherein the approach point is a point intermediate full disengagement and the touch point, preferably almost to the touch point.* After full disengagement of the master clutch, when a required clutch engagement is expected, the clutch is moved to

and dwells at the approach point, awaiting initiation of clutch engagement. The clutch may then be moved even more quickly and with less risk of overshoot to the touch point for commencement of controlled, modulated further engagement. (col.1, ll.41-54)

The patent defines "touch point", also called in the patent the "point of incipient engagement" of the clutch as "that point or position during engagement of the master clutch at which the master clutch just began to transmit torque." (col.1, ll.24-27).

8. The "touch point" and "approach point" are further described in the patent with reference to calibration of the clutch system (emphasis supplied):

With the vehicle stationary ... [and the] transmission ... in neutral ... [and] the engine ... at idle and the input shaft brake disengaged, the clutch actuator ... is caused to slowly move the clutch from the fully disengaged condition toward the engaged condition thereof while input shaft rotational speed ... is monitored.... *[A]t a certain point, the input shaft will begin to move, and this is taken as the approach point ...* The same procedure is repeated, except with the input shaft brake applied ... *and the point at which input shaft speed is sensed is taken as the touch point or point of incipient engagement ...* Points AP [approach point] and TP [touch point] represent values of a clutch control parameter, such as actuator pressure and/or voltage or an actuator position, as is known in the prior art. (col.5, ll.29-44)

9. Thus in simple term paraphrase, the patent teaches that approach point and touch point are established by clutch calibration, approach point being at a distance very close to touch point, and the system is programmed to have the clutch go to approach point between engagements and disengagements so it can move more quickly to engagement when so commanded and be less likely to overshoot the touch point.

10. For purposes of addressing disputed claim terms, claims 1, 2, 3 and 8 are representative and are set out below:

Claim 1. A method for controlling an automated vehicular master-friction clutch (16) drivingly interposed between an engine (14) and an input shaft (52) of a multiple-speed transmission (12), said clutch having an *approach point condition*, said method characterized by:

determining a value (AP) of said clutch control parameter indicative of said clutch being at the *approach point condition*; and

(b) *after disengaging said clutch and while awaiting a clutch engagement command, causing said clutch to assume and remain in the approach point condition thereof.*

Claim 2. The method of claim 1 wherein said transmission has a *controllable input shaft retarding device* (18) associated therewith, said value determined while said device is inactive.

Claim 3. The method of claim 1 wherein said clutch is associated with a vehicular automated mechanical transmission system, said transmission has a controllable *input shaft retarding device* associated therewith ...

step (a) comprising (i) causing *the engine retarding device* to be released ...

Claim 8. A method for controlling an automated vehicular master friction clutch (16) drivingly interposed

between an engine (14) and an input shaft (52) of a multiple-speed transmission (12), said clutch having a *touch point condition* and an *approach point condition*, said method characterized by:

(a) *determining a first value (TP) of a clutch control parameter indicative of said clutch being at the touch point condition thereof;*

(b) *determining a second value (AP) of said clutch control parameter indicative of said clutch being at the approach point condition thereof; and*

(c) *after disengaging said clutch and while awaiting a clutch engagement command, causing said clutch to assume and remain in the approach point condition thereof.*

11. The principal claim construction dispute centers on the terms "touch point", "touch point condition", "approach point" and "approach point condition".

(i) Plaintiff contends that such terms are "expressly defined" in the patent specification and this "ends the claim construction inquiry" under Federal Circuit law citing *ASM Am., Inc. v. Genus, Inc.* 401 F.3d 1340 (Fed.Cir.2005) and *Renishaw PLC v. Marposs Societa Per Azioni*, 158 F.3d 1243 (Fed.Cir.1998) for the proposition that patentee's express definition of terms ordinarily controls.

In particular, plaintiff contends that "touch point" is defined as noted in paragraphs 7 and 8 hereof and accordingly "touch point condition" in the claims should be construed to mean "a point of incipient engagement of the clutch and requires some minimum amount of torque transfer across the clutch". Furthermore, plaintiff defines "approach point" as a point "intermediate full disengagement and the touch point, preferably almost to the touch point" as noted in paragraph 7 hereof and accordingly "approach point condition" in the claims should be construed to mean "a point intermediate full disengagement and touch point, preferably almost to the touch point".

Plaintiff urges that no further limitations be read into the claims, in particular the patent's disclosed calibration method (paragraph 7 above) by which "touch point" and "approach point" are determined. Plaintiff contends that the disclosed calibration method, as a "preferred embodiment of a calibration technique" should not be "imported" into claims 1 and 8; and that under patent law principles of claim differentiation, dependent claims 3 and 6 "define the calibration technique" and therefore the broader claims should not be so limited.

(ii) Defendants on the other hand contend that the terms "touch point", "touch point condition", "approach point" and "approach point condition" must be construed to include the calibration technique set out in paragraph 7 above. Otherwise the claims are "ambiguous" and "indefinite". Regarding "touch point", defendants argue that in the prior art there are taught "numerous, conflicting ways" to determine "touch point" or "point of incipient engagement" which "provide different results" and therefore if the claims here are not construed to include the patent's technique for determining "touch point", there is created "ambiguity concerning the first value (TP) indicative of the clutch being at the touch point condition". In particular, defendants contend that there are "countless ways" in the art to calibrate "touch point," noting three earlier patents owned by plaintiff:

(a) Defendants contend that U.S. 4,899,858 determines "point of incipient engagement" (touch point) as "where the clutch produces approximately 10 ft-lbs of torque, making the point found an upper bound on the

incipient engagement point." The "actual incipient engagement point" is then "approximated" by "subtracting" a "small constant offset".

(b) Defendants contend that U.S. 5,337,868 determines "touch point" by "putting transmission in neutral", the engine at "idle" and "progressively" engaging the clutch until the "transmission input speed reaches a predetermined fraction of the engine idle speed" thus transferring "torque", then subtracting a "small fixed offset" to "determine the touch point".

(c) Defendants contend that U.S. 4,646,891 determines "touch point" by a technique using measurement of a "rate of change" of a "value", among other things, to arrive at "incipient clutch engagement" or "touch point."

These various techniques, defendants contend, "produce different results" in determining "touch point", thus making "touch point" without an accompanying disclosure of how to determine it a "moving target". Therefore, defendants argue, the claims here to be "definite" both for validity and to accord accused infringers an understanding of claim scope, must be construed to include in the meaning of "touch point" the particular calibration technique disclosed in the patent in suit.

Similarly with regard to "approach point", defendants contend that plaintiff's asserted definition, i.e. a point "intermediate full disengagement and touch point, preferably almost to touch point" leaves "lingering doubts" about its meaning which can only be resolved by construing "approach point" to include the explanation set out in the calibration technique at paragraph 8 hereof, i.e. "the point at which the input shaft will begin to move" with the "input shaft brake disengaged".

Defendants therefore invite a claim construction which includes reference to Fig 4 of the patent and the algorithm it embraces which in effect is the calibration technique set out in paragraph 7 above. So construed, defendants contend the claims would not be "indefinite", would avoid "ambiguity" and thus their validity under 35 U.S.C. 112 would be "preserved".

(iii) Plaintiff's response is that defendants' proposed construction is a "thinly veiled attempt to avoid infringement"; that it is an unjustified attempt to incorporate "specific calibration techniques" into the claims; and that it makes no difference to the claimed invention by what method "touch point" and "approach point" are determined, i.e. they can be determined in "any possible way". Plaintiff concedes that the claims so construed are "broad" but contends "breadth is not indefiniteness."

(iv) Supporting plaintiff is the undisputed principle that limitations in patent specifications generally are not imported into the claims and claim scope narrowed thereby. Furthermore, issues of infringement and validity generally are separate from claim construction. As for infringement, structure of accused infringing devices (if known to the fact finder) is not to be considered in claim construction. As for validity, the general rule is that validity considerations are not part of claim construction. *Liebel-Flarsheim*, supra.

Thus straightforward application of these principles argues for plaintiff here.

(v) Defendants however note correctly that the Federal Circuit considers claim "indefiniteness" under Section 112 a legal issue to be addressed by the construer of claims. In *Atmel Corp. v. Info. Storage Devices, Inc.* 198 F.3d 1374 (Fed.Cir.1999) and *Personalized Media Commc'ns LLC v. ITC*, 161 F.3d 696 (Fed.Cir.1998), cited by defendants, the Federal Circuit did consider "indefiniteness" in claim construction

and in particular held that evidence relating to those skilled in the art was appropriate, indeed necessary, to resolve the "indefiniteness" issues.

In *Atmel*, the District Court granted summary judgment of invalidity based on "indefiniteness". The Federal Circuit reversed because the District Court failed "to consider the knowledge of one skilled in the art that indicated that the specification disclosed sufficient structure to satisfy 35 U.S.C. Sec. 112, para. 2." Unrebutted expert testimony before the District Court to the effect that "one skilled in the art" would not find the patent disclosure indefinite or ambiguous was "disregarded" which was "error". Thus, as stated in *Atmel*, "... whether a claim is invalid as indefinite 'depends on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the specification' "citing *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571 (Fed.Cir.1993). Furthermore in *Personalized Media*, the ITC held a claim "invalid for indefiniteness" under 35 U.S.C. Sec 112, para. 2 despite expert testimony to the contrary. The Federal Circuit reversed stating "Determining whether a claim is definite requires an analysis of 'whether one skilled in the art would understand the bounds of the claim read in light of the specification ... If the claims read in light of the specification reasonably apprise those skilled in the art the scope of the invention, Sec. 112 demands no more.' *Miles Lab., Inc. v. Shandon, Inc* 997 F.2d 870, 875 (Fed.Cir.1993)."

(vi) The expert reports in this case are instructive on the "indefiniteness" issue. Dr. Edward M. Caulfield, plaintiff's expert, opined that the claims are "definite" within the meaning of the statute. (Caulfield rept, 3/31/06 at 8; declar. 7/10/06)). He stated among other things that the '350 patent "sets forth express definitions" regarding touch point and approach point which would be "easily understood by one of ordinary skill" and considered it "irrelevant" that "other references" define touch point "slightly differently". Dr. Gregory Davis, defendant's expert, opined otherwise (Davis rept, 3/16/06 at 19-22). In his 3-page analysis, he explains why "one of ordinary skill in the art" would consider the '350 claims "at least as Eaton has interpreted" them "indefinite"

Thus the experts are in head-to-head confrontation about "indefiniteness" and how those skilled in the art would view the matter. While it is not surprising in patent litigation for experts to disagree, the resolution must include examination and cross examination of the experts as well as consideration of any other relevant evidence regarding those skilled in the art. Accordingly, pursuant to authority granted the Special Master by the Court an evidentiary hearing was held to explore these matters.

12. Drs. Caulfield and Davis testified at the hearing. The parties stipulated that both experts are qualified to express opinions about how those skilled in the art would understand the teachings of the '350 patent, in particular whether the patent claims are "indefinite" or "ambiguous" under applicable law. The experts materially agree on the level of ordinary skill in the art at the time the '350 invention was made viz. an undergraduate degree in engineering and between 3-5 years practical experience in truck transmission design or evaluation, in particular truck drive train systems, including interaction with truck brake systems. (Davis rept. 3/16/06, para. 31; Caulfield rept. 3/3/06, p.8, Tr. 17, 113-114) Based on the experts' reports and declarations as augmented by their testimony, the Special Master makes the following findings and conclusions:

(i) The essential teaching of the '350 patent is to identify a touch point, then identify an approach point based on the touch point, and use those two points to improve clutch responsiveness during engagement. In order to decrease the time required when reengaging the clutch, the patent teaches to command the clutch to assume and remain at the approach point after disengagement of the clutch. From the approach point, the

clutch actuator moves the clutch rapidly to the touch point. *I.e.* instead of staying at a fully disengaged condition, the system automatically advances the state of the clutch to an approach point condition that is intermediate full disengagement and touch point condition. (Caulfield 7/10/06 declar. para. 4; Caulfield rept. 3/3/06, pp. 7-8; Davis rept. 3/16/06, para. 56-58; Tr. 79, 109-110)

(ii) "Touch point", also called "point of incipient engagement", was a term known to those skilled in the art at the time the '350 invention was made but there was no agreed standard for determining "touch point". There are a number of ways to determine touch point, one of which is taught in the '350 patent. The prior art taught that "touch point" should be in a range where a relatively small amount of torque is being transmitted. (Davis rept. 3/16/06, para. 76; Caulfield 7/10/06 declar. para. 5, 7; Davis dep. 5/19/06 at pp. 9-10; Tr. 25-26, 113, 117, 129, 134-135)

(iii) Whether "touch point" is determined by using the technique disclosed in the '350 patent or some other technique known in the art is not critical to practicing the teachings of the '350 patent and achieving the purposes of the '350 invention. For purposes of understanding and practicing the '350 claimed invention, the various techniques taught by the prior art for determining "touch point" are not inconsistent and the fact that some prior art references define "touch point" somewhat differently is not relevant to the express definition set out in the '350 patent.. (Caulfield 7/10/06 declar. para. 6-14; Caulfield rept. 3/31/06, p. 8; Tr. 129, 134-135)

(iv) "Approach point" is not a term of art used by automotive engineers. One of ordinary skill in the art reading the '350 patent would understand that "approach point" and "approach point condition" refer to a "point" and "condition" in which the "point" is intermediate the fully disengaged point and the point of incipient engagement, *i.e.* the touch point. (Davis rept. 3/16/06, para. 73,74; Tr. 65, 79, 111-112)

(v) The '350 patent sets forth express definitions for "approach point", "approach point condition" and "touch point" and such definitions are clear enough so that one of skill in the art can easily understand what is claimed when read in light of the patent specification. (Caulfield rept. 3/31/06, p. 8; Tr. 109-110, 134-135, 137-144)

(vi) Thus, plaintiff's proposed claim construction of "touch point condition" and "approach point condition" *viz.* "touch point condition" means "a point of incipient engagement of the clutch and requires some minimum amount of torque transfer across the clutch", and "approach point condition" means "a point intermediate full disengagement and the touch point, preferably almost to the touch point" accurately and without indefiniteness or ambiguity set out the meaning of the claims to the art-skilled. (i-v above)

13. In view of the evidence relating to whether those skilled in the art would consider the claims "indefinite" and "ambiguous" and giving due regard to the testimony and credibility of the witnesses, the Special Master finds that defendants have failed to show by clear and convincing evidence that the claims are invalid for being "indefinite" within the meaning of applicable law. Defendants' Motion for Summary Judgment of Invalidity is therefore DENIED.

Parenthetically, it is noted that the claim construction here found leaves the claims "broad" as sought by plaintiff, *i.e.* not limited to the specific calibration technique disclosed in the patent. Arguably, this opens up the claims to further validity scrutiny under 35 U.S.C.102 ("anticipation") and 35 U.S.C. 103 ("obviousness"). Defendants have so challenged validity. (Davis rept, 3/16/2006). Dr. Davis opines that the claims are invalid over prior art if construed "according to ... [plaintiff's] claim construction." (Rept at pp

22-40). Dr. Caulfield in his reports disagrees. Under Federal Circuit precedent, such validity challenge is ripe for consideration at trial. See *Liebel-Flarsheim Co. v. Medrad, Inc.*, *supra*, wherein the Court held that claims construed not indefinite or ambiguous, and accordingly broad, are subject "on remand" to "head-on" validity challenge on other grounds. 358 F.3d at 911-914.

14. The parties dispute interpretation of the phrase (claim 1) "after disengaging said clutch and while awaiting a clutch engagement command, causing said clutch to assume and remain in the approach point condition thereof". Defendants contend that it should be construed to limit it to the situation of the clutch being "physically moved *in the direction of* engagement" to the approach point condition "*where it must remain*" until a clutch engagement command is issued (emphasis supplied). Defendants say such construction is "consistent" with the patent specification. Plaintiff contends that nothing in the intrinsic evidence justifies such construction which arguably narrows claim scope.

Defendants point to nothing in the intrinsic evidence to persuasively justify their position. The fact that it is "consistent" with the patent's teachings is not controlling.

Defendants' arguments are rejected.

15. The parties dispute interpretation of the phrase "controllable input shaft retarding device." Defendants contend that the "device" should be further defined as "connected or linked to the input shaft." The "retarding device" referred to is identified in the specification as "input shaft brake 18." Plaintiff again contends that nothing in the intrinsic evidence justifies such construction which narrows the claim scope.

Defendants point to no persuasive justification in the intrinsic evidence to support their position which is essentially that it is consistent with what is disclosed in the patent. Their argument is rejected.

16. Plaintiff seeks to have the phrase "the *engine* retarding device" in claim 3 corrected and construed "*input shaft* retarding device" because as written, plaintiff contends, it is an obvious typographical error. Defendants object noting that the patent specification discloses an "engine brake" and that the correction is therefore unwarranted and prohibited by case law.

While courts generally do not correct claims and generally do not make changes in claims which have substantive impact on claim construction, the alleged error here, when taken in context, is clearly typographical and will be so considered. Nowhere in the specification is the term "engine retarding device" used. Furthermore claim 3 uses the term "input shaft retarding device" early in the claim and reference later to "engine retarding device", considered in context, is manifest typographic error.

Defendants' arguments to the contrary are rejected.

CONCLUSIONS

(1) The disputed claim terms are construed as indicated in the body of this report.

(2) Defendants' Motion for Summary Judgment of Invalidity for Indefiniteness of U.S. Patent 5,624,350 is DENIED.

E.D.Mich.,2006.

Eaton Corp. v. ZF Meritor LLC

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