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Paper 24
Entered: March 15, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KOITO MANUFACTURING CO., LTD, and
SL CORPORATION,
Petitioner,

v.

ADAPTIVE HEADLAMP TECHNOLOGIES, INC.,
Patent Owner.

Case IPR2016-00079[1]
Patent 7,241,034 C1

Before MICHAEL P. TIERNEY, *Vice Chief Administrative Patent Judge*, RAMA G. ELLURU and SCOTT C. MOORE, *Administrative Patent Judges.*

MOORE, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

[1] Case IPR2016-01368 has been joined with this proceeding.

I. INTRODUCTION

Koito Manufacturing Co., Ltd. ("Petitioner") filed a Petition (Paper 2; "Pet.") to institute an *inter partes* review of claims 3–26 and 28–35 of U.S. Patent No. 7,241,034 C1 (Ex. 1001; "the '034 patent"). Adaptive Headlamp Technologies, Inc. ("Patent Owner") filed a Preliminary Response (Paper 10; "Prelim. Resp."). The Board instituted a trial as to claims 3–26, 28–32, and 35 of the '034 patent. Paper 11 ("Dec. on Inst.").

After institution of trial, Patent Owner filed a Patent Owner Response ("PO Resp.") to the Petition. Paper 16. Petitioner filed a Reply ("Reply") to the Patent Owner Response. Paper 18. Petitioner relies on the Declaration of Ralph V. Wilhelm, Ph.D. (Ex. 1019) in support of its Petition, and the Reply Declaration of Ralph V. Wilhelm, Ph.D. (Ex. 1037) in support of its Reply. Patent Owner relies on the Declaration of Joe Katona (Ex. 2002) in support of its Response.

An oral hearing was held on January 11, 2017. The record contains a transcript of this hearing. Paper 23 ("Tr.").

We have jurisdiction over this dispute under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. Petitioner has shown by a preponderance of the evidence that claims 3–26, 28–32, and 35 are unpatentable under 35 U.S.C. § 103(a).

II. BACKGROUND

A. Related Proceedings

The '034 patent was subject to an *ex parte* reexamination (Control No. 90/011,011) and an *inter partes* reexamination (Control No. 95/001,621) filed by Volkswagen Group of America, Inc. Pet. 1. These reexamination

proceedings were merged and resulted in issuance of an *inter partes* reexamination certificate. *Id.*; Ex. 1002.

The ’034 patent also was the subject of prior litigation in the U.S. District Court for the Eastern District of Texas. Pet. 1–2. Neither Petitioner nor its subsidiaries were parties to this prior case, which was dismissed without prejudice on May 18, 2010. *See id.* The ’034 patent is asserted by Patent Owner in several pending litigations in the U.S. District Court for the District of Delaware. Pet. 2; Paper 6, 2–3. Petitioner is not a party to any of these Delaware litigations. *See id.*

B. The ’034 Patent

The ’034 patent discloses a structure and method for operating a directional control system for vehicle headlights. Ex. 1001, Abstract. Figure 1 of the ’034 patent is reproduced below.

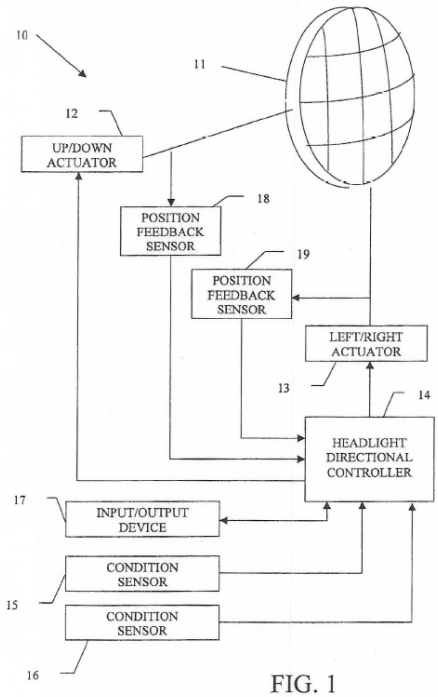

FIG. 1

Figure 1 is a block diagram of automatic directional control system 10 for a vehicle headlight. *Id.* at 2:28–30, 63–65. Headlight 11 is mounted on a vehicle in a manner that permits the direction of projected light to be adjusted by actuators 12 and 13. *Id.* at 3:10–13, 26–28. Condition sensors 15 and 16 sense operating conditions of the vehicle, and generate electrical signals that are responsive to the sensed operating conditions. *Id*. at 3:61–64. Headlight directional controller 14 receives the electrical signals generated by condition sensors 15 and 16, and responds by selectively operating actuators 12 and 13 to adjust the position of headlight 11. *Id.* at 3:49–58. The disclosed automatic directional control system also includes feedback sensors 18 and 19, which generate signals representative of the actual up/down and left/right position of headlight 11, and supply these signals to controller 14. *Id*. at 4:8–24. These feedback signals can be used to calibrate the disclosed system. *Id.* at 6:10–17.

C. Challenged Claims

Challenged claims 3 and 7 are independent claims, and the remaining challenged claims depend, directly or indirectly, from either claim 3 or claim 7. Claim 7 is illustrative of the challenged claims, and is reproduced below.

> 7. An automatic directional control system for a vehicle headlight, comprising:
>
> two or more sensors that are each adapted to generate a signal that is representative of at least one of a plurality of sensed conditions of a vehicle such that two or more sensor signals are generated, said sensed conditions including at least a steering angle and a pitch of the vehicle;

a controller that is responsive to said two or more sensor signals for generating at least one output signal only when at least one of said two or more sensor signals changes by more than a predetermined minimum threshold amount to prevent at least one of two or more actuators from being operated continuously or unduly frequently in response to relatively small variations in at least one of the sensed conditions; and

said two or more actuators each being adapted to be connected to the vehicle headlight to effect movement thereof in accordance with said at least one output signal;

wherein said two or more sensors include a first sensor and a second sensor; and

wherein said first sensor is adapted to generate a signal that is representative of a condition including the steering angle of the vehicle and said second sensor is adapted to generate a signal that is representative of a condition including the pitch of the vehicle.

D. References Relied Upon

Petitioner relies on the following references:

References	**Exhibit No.**
Japan Patent Application Publication H10-324191 (pub. Dec. 8, 1998) ("Kato")	1006, 1007
UK Published Patent Application GB 2 309 774 A (pub. Aug. 6, 1997) ("Takahashi")	1008
Japan Patent Application Publication H7-164960 (pub. June 27, 1995) ("Mori")	1009, 1010
Japan Patent Application Publication H01-223042 (pub. Sept. 6, 1989) ("Uguchi")	1011, 1012
Ishikawa et al, "*Auto-Levelling Projector Headlamp System with Rotatable Light Shield*," SAE Technical Paper Series No. 930726, Mar.1993 ("Ishikawa")	1013

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