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Datasheet for the decision of 22 November 2019

Case Number: T 1591/16 - 3.2.04

Application Number: 04006975.9

Publication Number: 1450022

IPC: F02D9/10, F02D11/10

Language of the proceedings: EN

Title of invention:
Motor driving type throttle apparatus

Patent Proprietor:
Hitachi, Ltd.
Hitachi Car Engineering Co., Ltd.

Opponent:
PIERBURG GMBH

Headword:

Relevant legal provisions:
EPC Art. 56
RPBA Art. 12(4)

Keyword:
Inventive step - (yes)
Late-filed evidence - submitted with the statement of grounds of appeal

Decisions cited:

Catchword:

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Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1591/16 - 3.2.04

D E C I S I O N
of Technical Board of Appeal 3.2.04
of 22 November 2019

Appellant: (Opponent)	PIERBURG GMBH Alfred-Pierburg-Str. 1 D-41460 Neuss (DE)
Representative:	ter Smitten, Hans Ter Smitten Eberlein Rütten Patentanwälte Partnerschaftsgesellschaft Burgunderstrasse 29 40549 Düsseldorf (DE)
Respondent: (Patent Proprietor 1)	Hitachi, Ltd. 6-6, Marunouchi 1-chome Chiyoda-ku Tokyo 100-8280 (JP)
Respondent: (Patent Proprietor 2)	Hitachi Car Engineering Co., Ltd. 2477, Takaba Hitachinaka-shi, Ibaraki 312-0062 (JP)
Representative:	MERH-IP Matias Erny Reichl Hoffmann Patentanwälte PartG mbB Paul-Heyse-Strasse 29 80336 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 27 May 2016 rejecting the opposition filed against European patent No. 1450022 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	A. de Vries
Members:	S. Oechsner de Coninck
	C. Heath

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal, received on 6 July 2016 against the decision of the Opposition Division dated 27 May 2016 to reject the opposition against the patent EP 1 450 022, and paid the appeal fee the same day. The statement setting out the grounds of appeal was filed on 31 August 2016.

II. Opposition had been filed to the patent as a whole and based on Article 100(a) in conjunction with Articles 52(1), 54(2) and 56 EPC. The Opposition Division had held that the grounds for opposition mentioned in Article 100(a) EPC did not prejudice the maintenance of the granted patent, having regard to the following documents in particular:

D1: DE 296 06 042 U1
D3: US 5 868 114

III. The further following documents were cited in appeal:
D8: DE 197 28 349 Al
D9: DE 198 20 421 Al
D10: DE 43 37 390 Al
D11: US 5,094,212
D12: EP 0 317 813 A2

IV. In a communication in preparation for oral proceedings the Board gave its preliminary opinion on the relevant issues.

Oral proceedings were held on 22 November 2019.

V. The appellant requests that the decision under appeal be set aside and that the patent be revoked.

VI. The respondent requests that the appeal be dismissed.

VII. The independent claim 1 as granted reads as follows:
"A motor driving type throttle apparatus characterized in that a cover (10) for covering one end of a throttle valve shaft (8) is attached to a side wall of a throttle body (1) having a throttle valve (2), and an electronic control module (11) for controlling the throttle valve (2) is attached to said cover (10), wherein
an inner face of said cover (10) is attached with said electronic control module (11) for controlling the throttle valve (2) and a throttle position sensor (9) for detecting an opening degree of the throttle valve (2) contiguous to each other, and terminals (91-96) of said throttle position sensor (9) are directed to a side of the electronic control module (11) and connected to terminals (121-126) of said electronic control module (11)."

VIII. The appellant argues as follows:
Starting from D1, the skilled person would consider the teaching of D3 as relevant for solving the problem of improved integration and compactness. D3 discloses an embodiment with a motor driven throttle apparatus (figures 2, 4 and 5). In column 2, lines 33 the skilled person is taught to integrate components into the same space. As D1 already integrates the sensor together with its electronic control on a cover, by application of the above general teaching derived from D3 to D1, the skilled person would further integrate the throttle valve electronic control and also place it on the cover 9 (Deckel 9).

IX. The respondent argues as follows:
The skilled person starting from D1 and considering D3, would look toward the only specific teaching as derivable from the embodiment. In this embodiment a control unit 17 is provided on a separate plate spaced apart from the cover. Therefore D3 fails to disclose the teaching to provide a control unit of the throttle on a cover of the throttle valve shaft.

Reasons for the Decision

1. The appeal is admissible.

2. Admissibility of the Documents D8 to D12

2.1 Together with its statement of grounds of appeal of 31 August 2016, the appellant submits additional documents D8 to D12. In the preparatory communication, sections 3, 4 (2nd paragraph), 5.2 and 5.3, the Board gave its preliminary opinion regarding admissibility and prima facie relevance of the documents.

2.2 Thus, according to Article 12(4) RPBA, the Board has the discretionary power to hold inadmissible facts, evidence or requests which could have been presented or were not admitted in the first-instance proceedings. According to the established jurisprudence, a crucial criterion to be taken into account is whether a late-filed document is prima facie highly relevant and whether there is proper justification for its late filing to forestall tactical abuse. Such material should be prima facie highly relevant in the sense that it can reasonably be expected to change the eventual result and is thus highly likely to prejudice the

maintenance of the European patent (Case Law of the Boards of Appeal, 9th edition, 2019, V.A.4.13.2).

2.3 Concerning the justification, the appellant merely refers to the interpretation of the patent in the framework of novelty and inventive step (page 4, first paragraph) without any explanation. Justification for the late filing is therefore not apparent to the Board.

2.4 D8 discloses a throttle-valve position-detecting and load-detecting module 2 designed as a toroidally-shaped component part at the circumference of an intake manifold 4 of a motor-vehicle (col 3, lines 33-35). The module 2 does not appear as a cover for covering one end of the throttle valve shaft. In fact, the end of the throttle valve shaft ("Schwenkachse" 12) does not appear to be depicted in any detail with respect to a side wall of the throttle body and its cover. Prima facie, this document does not appear any more relevant than D1 for the question of novelty.

2.5 D9 discloses a throttle apparatus with an actuating motor 7 and a throttle position sensor 32. Connector terminals 37 of the throttle position sensor 32 and the connector terminals 38 of the throttle actuating motor 7 are co-located in a connector casing 35A provided in the sensor cover 35. Apparently, D9 does not disclose any electronic control of the throttle, and at least does not appear any more relevant or promising as a starting point for assessing inventive step than D3 (or D2) already considered in first instance.

Insofar as combination documents D8,D12 or D11 are concerned, it is questionable whether, prima facie, they teach or otherwise suggest integration of an electronic control module for the throttle valve and

throttle position sensor integrated on an inner side of a cover of the throttle body.

D12 (col. 2, lines 18-22; figure) discloses an electronic control ("elektronische Kontrolleinheit 36") located in a separate housing ("Raum 34") of the casing ("Gehäuse 32"). The configuration of the housing is not further explained, nor depicted.

D11 discloses a throttle body assembly comprising a throttle valve that is mechanically actuated by a rotatable drum 7 attached to a shaft 6. The assembly further comprises an electronic control unit 10, which is attached to an inner wall surface of the valve casing 11 (col 3, lines 24-28).

2.6 Similar comments concern the combination of D10 with any of D8,D9 or D12.
D10 discloses a drive unit for displacement systems in motor vehicles. D10 does not disclose a throttle mechanism or control but rather a drive system for a car window or seat adjustment (col 5, lines 45-48). Its prima facie relevance as starting point for assessing inventive step of a motor driving throttle apparatus appears even less promising than D9.

2.7 Absent any further argument or reply from the appellant on the issue of admissibility of either D8 to D12, the Board sees no reason why it should depart from its preliminary view. It concludes that neither D8 appears prima facie novelty destroying, nor the combination of D9 or D10 with any of the documents D8,D10,D11 or D12 appears promising to deny inventive step. For these reasons the Board decided to use its discretion under Article 12(4) RPBA not to admit the late filed documents D8 to D12 into the proceedings.

3. Inventive step

3.1 D1 has been taken as a promising starting point to assess inventive step. In D1 the module "Baugruppe 30" with the analysis circuit for the Hall-effect sensor 31 "Auswerteschaltung" depicted in figure 2 and explained on page 8, paragraph 2 is a module processing signals from the sensor. It is thus part of the position sensor and consequently is not an electronic control module for controlling the throttle valve. This difference with respect to the subject-matter of claim 1 has been acknowledged by the appellant, who no longer disputes novelty.

3.2 The problem identified in paragraph 9 of the patent is to provide a compact motor driving type throttle apparatus capable of being assembled to an engine with high reliability in simple manner. Starting from this problem the related objective technical problem associated with providing the electronic control module for controlling the throttle valve on the inner face of said cover, can be formulated as how to further improve compactness.

3.3 According to the appellant the skilled person would consider the teaching of D3 as relevant for solving this problem of improved integration and compactness. D3 discloses an embodiment with a motor driven throttle apparatus (figures 2, 4 and 5). In column 2, lines 33 the skilled person is taught to integrate components into the same space. In order to render the design even more compact, the skilled person would take up this general teaching in D3 by further integration of components, in particular the throttle control, into the cover 9.).

3.4 The Board is not convinced by this reasoning. The skilled person, looking towards D3 for a solution, will use the same reading skills as for reading claims, that is, reading contextually and with a mind willing to understand (Case Law of the Boards of Appeal, 8th edition, 2016, (CLBA) II.A.6.1) to understand its teaching and identify any content relevant to the problem posed. Thus it may be that D3 in its introductory portion in column 2, lines 29 to 38, identifies the benefits of placing detection and control in the same space in terms of integration. However, it is only in the detailed embodiments that they are taught exactly how to achieve these benefits. There a throttle position sensor 11 is provided within the sealed space S, and is constructed from a board 11a assembled to the body 2 by means of screws 11e (col. 3, lines 13-17 and col. 4, lines 3-4; figs 1 and 2). The control unit is attached in the same sealed space between the throttle body 2 and a gear cover 6 and attached to the body 2 through a gasket 12 (col. 3, lines 36-42). Thus, whereas the illustrative embodiment clearly teaches to attach the throttle sensor 11 and the control unit 17 independently on the body 2, the more general teaching submitted by the appellant of integrating a position detection sensor and control means is provided within the specific context of the sealed space S that is enclosed between the outer cover 6 and throttle body 2. This falls well short of integration on the same support of substrate, let alone on the throttle cover 6 and in a contiguous manner.

Thus, neither D1 nor D3 teaches the skilled person to specifically attach both a throttle position sensor and electronic control module for the throttle valve contiguous to each other on the same support. Nor do they hint at integrating the electronic control module

for the throttle on a cover for covering one end of the throttle shaft.

At best the skilled person applying the general teaching of D3 to D1 as suggested by the appellant, would consider also integrating a throttle control into the sensor space 6 located between the cover 9 and separation wall 4, either as an additional support in-between, as with plate 17 in D3, or anywhere else in that space. This is especially so as the module 30 with the analysis circuit for the Hall-effect sensor 31 (Auswerteschaltung) depicted in figure 2 to be attached to the cover 9 requires the whole surface of the inner cover and leaves little if no space for an additional control circuit for the throttle.

4. The Board concludes, therefore, that considering the combination of D1 with D3 as submitted by the appellant, the subject-matter of claim 1 as granted involves an inventive step. As noted the other combinations based on late filed prior art appear prima facie less relevant (and this prior art was therefore not admitted). Thus, this sole remaining opposition ground does not prejudice maintenance of the granted patent, as held by the Opposition Division in its decision.

5. In the light of the above, the Board confirms the Opposition Division's decision to reject the opposition under Article 101(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Magouliotis A. de Vries

Decision electronically authenticated