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**D E C I S I O N**  
**of 25 September 2003**

**Case Number:** T 0791/02 - 3.2.1  
**Application Number:** 98926234.0  
**Publication Number:** 0988474  
**IPC:** F16H 41/02, B62M 19/00  
**Language of the proceedings:** EN

**Title of invention:**  
Fluidic drive apparatus

**Applicant:**  
Hinrichs, Dennis C.

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 56, 96(2), 113(1)  
EPC R. 51(3), 67

**Keyword:**  
"Inventive step (yes)"  
"International Preliminary Examination Report adopted by the  
Examining Division as the only grounds for refusing the  
application under the EPC - substantial procedural violation  
(no)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0791/02 - 3.2.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.1  
of 25 September 2003

**Appellant:**

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**Representative:**

McLeish, Nicholas Alistair Maxwell  
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**Decision under appeal:**

Decision of the Examining Division of the  
European Patent Office posted 21 January 2002  
refusing European application No. 98926234.0  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** S. Crane  
**Members:** M. Ceyte  
G. Weiss

## Summary of Facts and Submissions

I. European patent application No. 98 926 234.0 (PCT/US 98/11 411), published under international publication No. WO 98/59 188, was refused by a decision of the Examining Division posted 21 January 2002.

II. The reason given for the decision was that the subject-matter of amended claim 1 did not involve an inventive step with respect to common general knowledge and

D1: FR-A-2 477 659

In the search report the following document was i.a. cited:

D3: FR-A-714 638.

III. On 28 March 2002 the appellant (applicant) lodged an appeal against this decision and paid the prescribed appeal fee at the same time.

The statement of grounds of appeal was filed on 31 May 2002.

IV. In response to communications from the Board the appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the following documents:

Claims:           1 and 18 to 22 as filed on 29 July 2003  
                  2 to 17 as filed on 4 April 2003

Description: pages 2a, 6, 7 filed on 4 April 2003.  
pages 3 and 5 annexed to the Board's  
communication dated 20 May 2003  
page 2 filed on 20 January 2000  
pages 1, 4, 8 as published.

Drawings: 1/8 to 8/8 as published.

Claim 1 reads as follows:

"1. An apparatus comprising:

a first housing means (20) for containing a fluid  
and including an inlet port (30) and an outlet port  
(24);

a second housing means (22) for containing said  
fluid and including an inlet port (26) and an outlet  
port (28);

a first conduit means (32) and a second conduit  
means (34) for conveying said fluid between said first  
housing means (20) and said second housing means (22);

a first turbine means (12) contained in said first  
housing means (20) and including a first shaft means  
(16) for transferring an external torque to said first  
turbine means (12), said first turbine means (12)  
converting said external torque to a pressure imposed  
on said fluid;

a second turbine means (14) contained in said  
second housing means (22) for converting said pressure  
imposed on said fluid to rotational energy, and  
including a second shaft means (18) for transferring  
said rotational energy to an external torque;  
characterised by a ratio adjustment means (42) for  
changing the ratio of the torques of said first shaft  
means (16) and said second shaft means (18), said ratio

adjustment means (42) being disposed around one of said first shaft means (16) and said second shaft means (18) and comprising a fixed disc (44) and a rotatable disc (46), both said fixed disc (44) and said rotatable disc having apertures (48), the discs (44, 46) being mounted side by side such that said turbines force said fluid through said ratio adjustment means (42) in a substantially axial direction."

- V. The appellant also requested reimbursement of the appeal fee on the ground of substantial procedural violation.

In support of this request, it submitted in essence the following:

- (i) In the International Preliminary Examination Report issued in connection with the application under appeal, the argument put forward by the Examining Division for claim 1 lacking an inventive step was as follows: "The... distinguishing feature [of claim 1] is merely one of several straightforward possibilities from which the skilled person would select, in accordance with the circumstances, without the exercise of inventive skill, in order to solve the problem posed". No additional arguments were presented in the communication from the Examining Division dated 22 May 2001.

The first sentence of the above argument is clearly a standard phrase of a very general nature, which provides no real indication of the reasoning of the Examining Division in determining that claim 1 lacked an inventive step.

In the representative's letter of 30 November 2002 in response to the above mentioned communication of 22 May 2001, it was specifically requested that the Examining Division provide further evidence to support and clarify their reasoning. No response to this request was made prior to the decision to refuse the application. However, in the decision the Examining Division stated that "if fluid is forced to flow through turbines with spiral-shaped vents in an axial direction, the skilled person would mount or dispose the ratio adjustment means of D1 on or around the shaft of a turbine in order to achieve the variable aperture for the flow of fluid near the inlet port", clarifying the Examining Division's position. If these comments had been made prior to the decision to refuse the application, then a detailed response could have been submitted by the applicant. Accordingly, the applicant did not have an opportunity to present their comments on all of the grounds for the decision, contrary to the requirements of Article 113(1) EPC.

- (ii) Furthermore the actions of the Examining Division to refuse this application were unreasonable given the circumstances. C-VI, 4.3 of the Guidelines for Examination in the EPO indicates that the examiner should not refuse an application immediately if

his objections are not overcome, but should warn the applicant that it will be refused unless more convincing arguments are produced. Immediate refusal should only be an exceptional case. In the present case it is noted that the IPER raised objections relating to unity of invention, clarity and inventive step. The issues of unity and clarity were responded to fully and apparently no longer give rise to objections while the issue of inventive step was addressed insofar as the objection could be understood for the reasons given above. There can therefore be no doubt that the representative's letter of 30 November 2002 amounted to a *bona fide* response to the objections that had been raised and that significant progress was being made to bring the application into conformity with the requirements of the EPC.

Immediate refusal was also unreasonable in the present case in view of the specific request in this letter that the Examining Division provide support and clarification for their arguments that claim 1 of the present application lacks an inventive step.

## Reasons for the Decision

1. The appeal is admissible.
2. *Formal matters*

There are no formal objections under Article 123(2) EPC to the amendments to claim 1, since they are adequately supported by the original disclosure.

Amended claim 1 states that the ratio adjustment means is "disposed around one of said first shaft means and said second shaft means". As specified on page 6, lines 1 to 3 of the original disclosure, "the ratio adjustment device may be integrated with a volute or with a housing or may be manufactured as a separate unit". The common feature to these different arrangements is that the ratio adjustment means is disposed around one of the shaft means in order to adjust the rate of flow of fluid passing in an axial direction. Accordingly "disposed around" has a sufficiently clear meaning (Article 84 EPC).

3. *Inventive step*
  - 3.1 Amended claim 1 is based in its precharacterising portion on the disclosure of prior art document D3 acknowledged in the introductory part of the European patent application.

The apparatus disclosed therein comprises (see Figures 1 and 2):



a first housing means for containing a fluid and including an inlet port and an outlet port (C);

a second housing means for containing said fluid and including an inlet port and an outlet port;

a first conduit means (D) and a second conduit means (H) for conveying said fluid between said first housing means and said second housing means;

a first turbine means contained in said first housing means and including a first shaft means (A) for transferring an external torque to said first turbine means, said first turbine means converting said external torque to a pressure imposed on said fluid;

a second turbine means (F) contained in said second housing means for converting said pressure imposed on said fluid to rotational energy, and including a second shaft means (G) for transferring said rotational energy to an external torque.

According to the appellant's submissions this known apparatus suffers from the problem that no means are provided for changing the ratio of the torques of the first and second shafts.

Therefore the technical problem to be solved by the present invention may be seen in providing an apparatus of the type disclosed in D3 which overcomes this disadvantage, without substantially increasing the dimensions of the overall system.

3.2 This problem is in essence solved by the following features stated in the characterising part of claim 1:

- (i) a ratio adjustment means is provided for changing the ratio of the torques of said first shaft means and second shaft means;
- (ii) the ratio adjustment means is disposed around one of said first shaft means and second shaft means,
- (iii) it comprises a fixed disc and a rotatable disc, both said fixed disc and said rotatable disc having apertures, the discs being mounted side by side such that said turbines force said fluid through said ratio adjustment means in a substantially axial direction.

3.3 D1 discloses an hydraulic transmission comprising a motorised turbine at one end of the transmission and a group of output turbines at the other end. The number of output turbines in the group of turbines is equal to the total number of gear speeds required. The motorised turbine is connected to the group of output turbines by a pair of pipes on which is mounted a gear selector by means of which the hydraulic fluid flow is selectively directed into one or more independent pathways connecting the output turbines in order to achieve a variation in the relative speed of the hydraulic transmission.

The motorised turbine, the gear selector and the group of output turbines are enclosed in a common housing.

The gear selector is not as such a ratio adjustment means used for changing fluid flow to the selected output turbine(s). The function of the gear selector is to select the separate pathways and thus the output turbines to be connected to the motorized turbine.

In any case, there is no disclosure of a ratio adjustment device having the characterizing features (ii) and (iii) above:

In D1 the gear selector is mounted separately from the turbines, its axis being parallel to the axis of the turbines. Thus no teaching is provided by D1 as to how the gear selector could be mounted around a shaft of a turbine.

Furthermore, the motorized turbine and the group of output turbines are of the paddle wheel type and thus force the fluid to flow in a substantially perpendicular direction to the axis of the rotating shaft. In contrast to this, both turbines in the claimed invention force the fluid to flow in a substantially axial direction through the ratio adjustment means mounted around one of said first and second rotating shafts.

It follows that the use of a ratio adjustment means having the distinguishing features (ii) and (iii) is neither disclosed nor suggested in document D1 and accordingly cannot be considered to be rendered obvious by the teaching of this citation. Therefore, even if the skilled person had considered applying the teaching given therein to the known fluidic drive apparatus

according to D3, he would not have arrived at the claimed solution.

- 3.4 The Board has also considered the further prior art documents cited on the search report and found them not prejudicial to the patentability of the subject-matter of claim 1, even when seen in combination with the above cited documents D3 and D1.

Accordingly, in the Board's judgement, the subject-matter of claim 1 involves an inventive step (Article 56 EPC).

4. Dependent 3 to 21 contain particular embodiments of the apparatus claimed in claim 1 and independent claim 22 relates to a cycle having the claimed apparatus. Since these claims contain all features of claim 1, this conclusion applies equally to these claims.

5. *Procedural matters*

According to the established case law of the boards of appeal it is left to the Examining Division's discretion to decide whether to issue a further invitation to present comments under Article 96(2) EPC. This does not mean that the applicant should be given repeated opportunity to comment on the same objection. In the international preliminary examination report (IPER), the examiner raised an objection of lack of inventive step based on prior art document D1 and common general knowledge. In the communication under Article 96(2) EPC dated 22 May 2002 the IPER was adopted by the Examining Division as the only basis for its opinion that the application did not meet the

requirements of Article 56 EPC. The Examining Division was apparently not convinced by the arguments submitted in the applicant's response and accordingly decided to refuse the patent application. In these circumstances the board is unable to see a procedural violation in not sending a further invitation to file observations.

Furthermore, Rule 51(3) EPC states that any communication pursuant to Article 96(2) EPC shall contain a reasoned statement covering, where appropriate, all the grounds against the grant of the European patent. In the present case, the communication of the Examining Division which refers to the IPER contains an indication of the facts and evidence in support of the ground of lack of inventive step, that is prior art document D1, its analysis, the comparison made between the known apparatus disclosed therein and that claimed in claim 1 and the problem to be solved by the invention. It also contains an indication of the related arguments in support of lack of inventive step; i.e. that the distinguishing feature [of claim 1] is merely one of several straight forward possibilities from which the skilled person would select, in accordance with the circumstances, without the exercise of inventive skill, in order to solve the problem he was confronted with.

Accordingly this substantiation, even if not complete, satisfies at least formally the above requirement of Rule 51(3) EPC.

It is important to observe that the requirements of Article 113(1) EPC are met since, firstly, the communication pursuant to Article 96(2) EPC refers to the IPER and states that the objections raised therein are equally applicable in the European proceedings before the Examining Division under the corresponding provisions of the EPC and, secondly, the decision of the Examining Division is entirely based on the grounds, facts and evidence which were already known to the appellant from the communication pursuant to Article 96(2) EPC and the IPER.

For the above reasons, the appellant's request for reimbursement of the appeal fee on the ground of a substantial procedural violation has to be refused.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of the documents indicated in point IV above.
3. The request for reimbursement of the appeal fee is refused.

The Registrar:

The Chairman:

S. Fabiani

S. Crane