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**Datasheet for the decision  
of 20 February 2009**

**Case Number:** T 0027/07 - 3.2.02

**Application Number:** 99115093.9

**Publication Number:** 0978251

**IPC:** A61B 1/12

**Language of the proceedings:** EN

**Title of invention:**  
Endoscope capable of being autoclaved

**Patentee:**  
Olympus Corporation

**Opponent:**  
HOYA CORPORATION

**Headword:**  
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**Relevant legal provisions:**  
EPC Art. 56

**Relevant legal provisions (EPC 1973):**  
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**Keyword:**  
"Inventive step (no)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0027/07 - 3.2.02

**DECISION**  
of the Technical Board of Appeal 3.2.02  
of 20 February 2009

**Appellant:**  
(Opponent)

HOYA CORPORATION  
7-5, Nakaochiai 2-Chome  
Shinjuku-ku  
Tokyo 161-8525 (JP)

**Representative:**

Schaumburg, Karl-Heinz  
Schaumburg, Thoenes, Thurn, Landskron, Eckert  
Patentanwälte  
Postfach 86 07 48  
D-81634 München (DE)

**Respondent:**  
(Patent Proprietor)

Olympus Corporation  
43-2, Hatagaya 2-chome  
Shibuya-ku  
Tokyo (JP)

**Representative:**

Käck, Jürgen  
Patentanwälte  
Kahler Käck Mollekopf  
Vorderer Anger 239  
D-86899 Landsberg (DE)

**Decision under appeal:**

Decision of the Opposition Division of the  
European Patent Office posted 9 November 2006  
rejecting the opposition filed against European  
patent No. 0978251 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** M. Noël  
**Members:** D. Valle  
M. J. Vogel

## Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal on 2 January 2007 against the decision of the opposition division posted on 9 November 2006 to reject the opposition against the patent No. 0 978 251. The fee for the appeal was paid simultaneously and the statement setting out the grounds for appeal was received on 19 March 2007.

II. The opposition division held that the claimed subject-matter involved an inventive step over the disclosure of the prior art documents, in particular,

D3 = DE - A1 - 3 708 124.

III. The appellant requested that the decision under appeal be set aside and that the patent be revoked. Auxiliarily, oral proceedings were requested.

The respondent (patentee) did not submit any reply during the appeal proceedings.

IV. In its statement of grounds for appeal, the appellant disputed the inventive step of the claimed subject-matter, in particular vis-à-vis the teaching of document D3 in combination with the general technical knowledge of the person skilled in the art.

V. Claim 1 as granted reads as follows:

"An endoscope capable of being autoclaved, comprising:  
an insertion unit (2) having a soft member (10);

an internal endoscope space including the internal space of said insertion unit (2) that is sealed at a first sealing level at which the internal endoscope space is sealed in a watertight manner relative to an outside; and contents (17, 31; 337, 358) each item of which is at least partially arranged within said internal endoscope space;

characterized in that

said soft member of said insertion unit is made of a soft polymeric material as at least part of an insertion unit casing;

said contents (17, 31; 337, 358) include at least one hermetically sealed unit (38, 39; 337, 358) composed of a plurality of airtight partition members (36, 37; 39, 41, 44, 47; 339, 338, 340; 360, 359, 361) and formed at a second sealing level higher than the first sealing level by joining the meeting portions of said airtight partition members using an airtight joining means (61 - 65); and,

even when high-pressure high-temperature steam given off during autoclaving permeates through said soft member (10) of said insertion unit (2) and invades into said internal endoscope space formed at the first sealing level, the high-pressure high-temperature steam will be hindered from invading into the hermetically sealed unit (38, 39, 337, 358) included in said contents and formed at the second sealing level."

## **Reasons for the Decision**

1. The appeal is admissible.

2. *Interpretation of claim 1*

The expression "one hermetically sealed unit (38, 39; 337, 358) composed of a plurality of airtight partition members (36, 37; 39, 41, 44, 47; 339, 338, 340; 360, 359, 361) and formed at a second sealing level higher than the first sealing level" is interpreted e.g. on the basis of the first embodiment of Figures 3 and 4 in the sense that the hermetically sealed unit (that is the imaging unit) comprises a plurality of airtight partition members such as, in particular, the cover glass 36, the distal frame 37, a lens frame 39, the group of objectives 38 and the isolating frame 41, which are all hermetically sealed to each other and in particular to a metallic frame body 47 (see Figure 8).

3. *Inventive step*

D3 (see Figures 29, 30) discloses an endoscope capable of being autoclaved, comprising:

- an insertion unit (152, 156, 157) having a soft member (see column 18, line 2);
- an internal endoscope space including the internal space of said insertion unit that is sealed at a first sealing level at which the internal endoscope space is sealed in a watertight manner relative to an outside.

As a fact, due to the provision in D3 of an air and water feeding button 181 on the operating part 153 (see Figure 29) and of an air and water feeding port 161 (see Figure 30), the internal space of the endoscope of D3 is necessarily water tight (see column 18, lines 15 and 49), in the same way as in the present patent the

watertight first sealing level is provided only with a waterproof cap 15 sealingly attached to the camera connection 7 (see Patent, paragraph [47] and [52]).

Further, D3 discloses contents (155, 162 - 164, 168), each item of which is at least partially arranged within said internal endoscope space, said contents including at least one hermetically sealed unit composed of a plurality of airtight partition members and formed at a second sealing level higher than the first sealing level, by joining the meeting portions of said airtight partition members using airtight joining means (175 to 178), so that even when high-pressure high-temperature steam given off during autoclaving permeates through said soft member of said insertion unit and invades into said internal endoscope space formed at the first sealing level, the high-pressure high-temperature steam will be hindered from invading into the hermetically sealed unit included in said contents and formed at the second sealing level (see column 18, lines 37 - 56).

Therefore, the endoscope of D3 is capable of being autoclaved and provides a similar solution to the problem addressed in the present patent (see paragraphs [15] and [35]).

However, D3 does not disclose the feature of claim 1 according to which the soft member of the insertion unit is made of a soft polymeric material.

This distinguishing feature is however usual in the field and considered as generally known in the patent itself (see paragraphs [10] and [20] of the

description). The solution of using this material in order to give to the insertion unit 152 of D3 the bending ability, is regarded as a normal design procedure.

The argumentation given in the decision under appeal (see point 3.5) is not convincing for the following reasons:

In D3 (see Figures 29 and 30) the flexible insertion unit 152 and the bendable element 157 may be made of polymeric material and restricted to these portions, in the same way as in the present patent the intermediate soft member flexible tube and the bendable parts 9 and 10 are made of polymeric material (see patent, Figures 1 and 3), excluding the distal end of the endoscope containing airtight partition members which are rigid and properly sealed by airtight joining means 175 - 178 (see D3, column 8, lines 37 - 56). The fact that soft polymeric material is not sufficiently airtight to be autoclaved (see patent, paragraph [17]) is not detrimental since in D3 as in the present patent, all the contents arranged within the internal space at the distal end of the endoscope are made of airtight partition members, that is having the required second sealing level.

Accordingly, the subject-matter of claim 1 does not involve an inventive step within the meaning of Articles 56 EPC.

**Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

D. Sauter

M. Noël