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D E C I S I O N
of 7 May 2004

Case Number: T 0194/99 - 3.4.1

Application Number: 93120881.3

Publication Number: 0604931

IPC: A61N 5/06

Language of the proceedings: EN

Title of invention:
Medical laser apparatus and diagnosing/curing apparatus using the medical laser apparatus

Applicant:
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 84, 123(2)

Keyword:
"Clarity (yes - after amendment)"
"Remittal to the first instance for further prosecution"

Decisions cited:
T 0455/92

Catchword:
-

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Case Number: T 0194/99 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 7 May 2004

Appellant: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 17 August 1998 refusing European application No. 93120881.3 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: G. Davies
Members: R. Q. Bekkering
M. G. L. Rognoni

Summary of Facts and Submissions

I. European patent application 93 120 881.3 (publication No. EP-A-0 604 931) was refused by a decision of the examining division dispatched on 17 August 1998, on the ground that the claims then on file did not meet the requirements of Article 84 EPC.

The examining division considered claim 1 to lack clarity *inter alia* because it defined a medical laser apparatus, in particular its bandwidth, as a function of absorption characteristics of a photosensitizer to be used with the apparatus. Since the photosensitizer was not part of the claimed subject-matter, the structural limitations resulting from the claim wording were not considered to be clear. The lack of clarity was considered to be similar to the case discussed in the Guidelines, C-III, 4.8a.

II. The appellant (applicant) lodged an appeal against the decision on 15 October 1998 and paid the appeal fee on the same day. The statement of the grounds of appeal together with an amended set of claims was received on 21 December 1998.

Oral proceedings were requested as an auxiliary measure.

III. In a communication of the board issued on 11 February 2003 a provisional appreciation on the issues of Articles 84 and 123(2) EPC were provided. Furthermore the board drew attention to US-A-4 932 934 (D3), a reference cited in the corresponding US patents of the application considered to be of particular relevance to the issue of novelty and inventive step. In view of the

fact that this document had not yet been considered in the first instance proceedings, the appellant was invited to state whether it agreed to all requirements of the EPC being considered in the appeal procedure or whether it wished the appeal procedure to be limited to the consideration of the requirements of Articles 84 and 123(2) EPC, with a possible remittal to the first instance for a consideration of the remaining requirements.

In its letter of reply dated 15 August 2003 the appellant opted for the latter.

IV. With a further communication dated 2 February 2004 the appellant was summoned to oral proceedings which were held on 7 May 2004.

V. The appellant requested that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution on the basis of claims 1 to 11 filed during the oral proceedings.

VI. Claim 1 reads as follows:

"*A medical laser apparatus for a method of diagnosing and/or curing a focus which has preliminarily been treated with a photosensitizer (6) having an affinity to the focus, by irradiating the focus with light from a laser (1) and detecting the fluorescent light collected from the excited focus,*
characterized in that
- *the laser (1) is a semiconductor laser,*
- *the medical laser apparatus comprises controlling means (8), wherein the wavelength of the laser (1)*

is controllable by the controlling means (8) controlling the temperature of the laser (1), and the laser is such that

- *the wavelength of the laser (1) is variable within 650±10 nm; or*
- *within 664±5 nm; and*

the laser (1) has a full width at half maximum which is narrower than the width of the band, in which the energy absorbtion [sic] of the photosensitizer is equal to or more than 90% of the maximal value of energy absorbtion [sic] in the vicinity of 650 or 664 nm, respectively."

VII. The appellant's submission in support of its request may be summarized as follows:

The invention was based on the recognition that the wavelength of the laser of the apparatus had to be controllable within 650±10 nm or 664±5 nm, so as to be within an effective absorption band of the chlorin or pheophorbide photosensitizers used for treatment and/or diagnosis of foci. This was now clearly defined in claim 1. Furthermore, the bandwidth of the laser had to be narrow with respect to these absorption bands of the photosensitizers. Claim 1 provided a clear algorithm defining the upper limit of the bandwidth of the laser as a function of given characteristics of these absorption bands, which were readily obtainable from absorption spectra of the photosensitizers.

Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. *Amendments*

Independent claim 1 is based on a combination of original claims 1, 2, 3, 9 and 10. The additional feature relating to the detection of the fluorescent light collected from the excited focus is derivable from claim 11 as originally filed and from the description (cf page 8, lines 17 to 28 of the published application). The amendment of the expression "oscillating wavelength" contained in original claim 1 is based on the originally filed description, from which it is apparent that the expression merely arose from an inaccurate use of language when referring to the wavelength of the laser light. There is no indication in the application documents as filed that the wavelength may oscillate as such, which could support an interpretation of the expression in this sense.

Dependent claims 2 to 11 are based on originally filed claims 5 to 8 and 11 to 16, respectively.

The Board is thus satisfied that the amendments comply with the requirements of Article 123(2) EPC.

3. *Clarity (Article 84 EPC)*

Claim 1 defines a medical laser apparatus. The laser is defined to be a semiconductor laser and the apparatus comprises controlling means, wherein the wavelength of the laser is controllable by the controlling means controlling the temperature of the laser.

The apparatus is defined as being suitable for a method of diagnosing and/or curing a focus which has preliminarily been treated with a photosensitizer having an affinity to the focus, by irradiating the focus with light from the laser and detecting the fluorescent light collected from the excited focus. Photosensitizers are substances which are sensitive to the influence of radiant energy and especially light. The absorption spectra (and emission spectra) of these substances, as such, are readily obtainable by straightforward spectroscopy. Typical photosensitizers used for diagnosing and curing foci are complex molecules showing a number of absorption bands in their absorption spectrum. The specific photosensitizers mentioned in the application are the chlorin photosensitizer NPe6 (a trade name of Nippon Petrochemical Co. Ltd.) having an effective absorption band for diagnosing or curing foci at 664±5 nm and the pheophorbide photosensitizer PH-1126 (a trade name of Hamari Chemicals Ltd.) having an effective absorption band at 650±10 nm (cf page 7, lines 41 to 49 and page 9, lines 16 to 19).

In claim 1 the laser is defined to be such that the wavelength of the laser is variable within 650±10 nm or within 664±5 nm. This would for instance correspond to

absorption bands of the pheophorbide and chlorin photosensitizers mentioned above.

Finally, the laser is defined to be such that it has a full width at half maximum (FWHM) which is narrower than the width of the band, in which the energy absorption of the photosensitizer is equal to, or more than 90% of the maximal value of energy absorption in the vicinity of 650 or 664 nm, respectively.

In the board's opinion the definition as such is understandable and allows deriving an upper limit for the FWHM of the laser light from the absorption spectra of the photosensitizers suitable for diagnosing or curing foci.

In principle, having regard to the clarity of a claim, it is possible in a claim for a first entity to define certain characteristics of that entity as a function of characteristics of a second entity employed when using the first entity. As such, there is no need for the claim to be directed to the combination of the first and the second entity (cf Guidelines, C-III, 4.8a and T 455/92). A prerequisite is, however, that the second entity and its relevant characteristics as such, not their exact values, are unambiguously identified in the claim. A claim drafted in this manner may be appropriate in cases in which a specification in the claim of exact values of certain characteristics would unduly limit the subject-matter of the claim.

In the present case it should be clear that the definition used of the bandwidth of the laser makes reference to absorption characteristics of any suitable

photosensitizer for diagnosing or curing foci and thus is correspondingly broad, leading to a large upper limit for the bandwidth. Furthermore, the bandwidth of the laser at any rate should fall within those already available, the application in suit being silent on any measures which could lead to unusually narrow bandwidths.

For the specific photosensitizers mentioned in the description NPe6 and PH-1126, the definition yields bandwidths of the order of several nanometres. According to the description, for these photosensitizers a bandwidth of the laser of for instance 2 nm would be suitable.

The board is thus satisfied that claim 1 provides a sufficiently clear definition of the medical laser apparatus and meets the requirements of Article 84 EPC. The dependent claims 2 to 11 define further features of the apparatus and comply with Article 84 EPC as well.

4. The contested decision was based on Article 84 EPC and did not consider the further requirements of the EPC, in particular the requirements of novelty and inventive step. In view of this and of the fact that a new document D3, cited in the corresponding US proceedings, has been introduced by the board in view of its relevance, the board considers it equitable that the appellant be given the opportunity to argue its case having regard to the remaining requirements of the EPC before the first instance.

Therefore, the board, in exercising its discretion under Article 111(1) EPC, considers it appropriate to

remit the case to the examining division for further examination.

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 for further prosecution on the basis of claims 1 to 11 according to the appellant's request submitted during the oral proceedings.

The Registrar: The Chairman:

R. Schumacher G. Davies