

Learning path for patent examiners

Sufficiency of disclosure: Entry level

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Introduction

This publication, "**Sufficiency of disclosure, Entry level**", is part of the "Learning path for patent examiners" series edited and published by the European Patent Academy. The series is intended for patent examiners at national patent offices who are taking part in training organised by the European Patent Office (EPO). It is also freely available to the public for independent learning.

Topics covered include novelty, inventive step, clarity, unity of invention, sufficiency of disclosure, amendments and search. Also addressed are patenting issues specific to certain technical fields:

- patentability exceptions and exclusions in biotechnology
- assessment of novelty, inventive step, clarity, sufficiency of disclosure and unity of invention for chemical inventions
- the patentability of computer-implemented inventions, business methods, game rules, mathematics and its applications, presentations of information, graphical user interfaces and programs for computers
- claim formulation for computer-implemented inventions

Each publication focuses on one topic at entry, intermediate or advanced level. The explanations and examples are based on the European Patent Convention, the Guidelines for Examination in the EPO and selected decisions of the EPO's boards of appeal. References are made to the Patent Cooperation Treaty and its Regulations whenever appropriate.

The series will be revised annually to ensure it remains up to date.

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1. Learning objectives

Participants to this course will learn:

- The definition and the legal basis of sufficiency of disclosure (Article 83 EPC).
- The principles underlying sufficiency.
- The definition of reproducibility.
- The definition of an enabling disclosure.
- The problems for disclosure posed by trademarks and inventions contrary to physical laws.

2. The legal basis for sufficiency of disclosure

The legal basis for sufficiency of disclosure is Article 83 EPC, which reads as follows:

"The European patent application shall disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art."

The idea behind Article 83 EPC is to achieve a balance between the exclusive rights defined by the claims (reward for the applicant) and the technical contribution to the art (gain for the public/society).

Examples

The following is an example of an invention which is insufficiently disclosed.

The claim defines "an apparatus for measuring Chi energy"; the description contains statements about the effect of Chi energy on an electromagnetic field. However, the existence of Chi energy is not proven scientifically.

Legal references:

Art. 83 EPC, GL F-III, 1, CL Book II.C.1

3. Disclosing the invention

To meet the requirements for sufficiency of disclosure, under Rule 42(1)(e) EPC the application should describe in detail **at least one way** of carrying out the claimed invention.

However, if there is only one example, the invention is not necessarily sufficiently (or insufficiently) disclosed. Bear in mind that the invention can still be sufficiently disclosed if it does not rely exclusively upon "non-working embodiments" (i.e. if some of the embodiments do not work in real life). On the other hand, the invention may be sufficiently disclosed even if the invention is technically difficult to carry out.

Examples

The following is an example of an invention which may be technically difficult to carry out but which may still be sufficiently disclosed: "a method of fitting an artificial hip joint which could be carried out by a surgeon having above-average ability".

Legal references:

R. 42(1)(e) EPC, GL F-III, 1, GL F-III, 5.3

4. Reproducibility without undue burden

To be sufficiently disclosed, an invention must be reproducible without undue burden over the whole area claimed. Examiners should therefore ask themselves the following question: "Can the skilled person perform the invention over the whole scope of the claim?"

Examiners need to bear in mind that one example may be enough for the skilled person to carry out the claimed invention. Furthermore, even though the invention may be "difficult" to carry out, the skilled person may still be able to perform the invention.

Legal references:

CL Book II.C.6

5. Enabling disclosure

Up to now, we have addressed the content of an application. To be sufficiently disclosed, an application must contain sufficient information to allow the skilled person, using their common general knowledge, to perform the invention over the whole scope of the claim without undue burden and without needing any inventive skill. However, the same also applies to the content of documents forming the state of the art.

Subject-matter can be regarded as having been made available to the public, and therefore part of the state of the art pursuant to Article 54(1) EPC, only if the information given is sufficient to enable the skilled person, at the relevant date (see Guidelines for Examination G-VI, 4 and G-IV, 2), considering the common general knowledge in the field at that time, to practise the technical teaching which is the subject of the disclosure (see T 26/85, T 206/83 and T 491/99).

Where a prior-art document discloses subject-matter which is relevant to the novelty and/or inventive step of the claimed invention, the disclosure of that document must be such that the skilled person can reproduce that subject-matter using common general knowledge (see Guidelines G-VII, 3.1). Subject-matter does not necessarily belong to the common general knowledge simply because it has been disclosed in the state of the art. In particular, if the information can only be obtained after a comprehensive search, it cannot be considered to belong to the common general knowledge and cannot be used to complete the disclosure (see T 206/83).

For example, a document discloses a chemical compound (identified by name or by structural formula), indicating that the compound may be produced by a process defined in the document itself. The document, however, does not indicate how to obtain the starting materials and/or reagents used in the process. If the skilled person cannot obtain these starting materials or reagents on the basis of common general knowledge (e.g. from textbooks), the document discloses that compound in a non-enabling manner. Hence, it is not considered to belong to the state of the art under Article 54(2) EPC and consequently does not prejudice the patentability of the claimed invention.

If, on the other hand, the skilled person knows how to obtain the starting materials and reagents (e.g. they are commercially available or are well known and appear in reference textbooks), the document discloses that compound in an enabling manner and therefore belongs to the state of the art under Article 54(2) EPC. Examiners can then validly rely on this document to raise objections against the claimed invention.

Examples

Consider a claim to the "use of compounds capable of stimulating the soluble guanylate cyclase independently of the heme group in the enzyme to make medicaments for treating cardiovascular disorders".

A claim of this kind is regarded as an example of insufficient disclosure because, in the absence of structural data on the compounds, the claim places an undue burden on the skilled person to isolate and characterise all the potential compounds for the claimed activity.

Legal references:

GL G-IV, 2, T 26/85, T 206/83, T 491/99

6. Performance of invention contrary to physical laws

It should be borne in mind that an invention cannot be sufficiently disclosed if it cannot be carried out. Successful performance of an invention may be impossible because it would be contrary to well-established physical laws (for example a perpetual motion machine or a time machine). This failure to satisfy the requirement of Article 83 EPC cannot be overcome. If the claims for any such machine are directed to its function and not merely to its structure, an objection arises not only under Article 83 EPC but also under Article 57 EPC (or Article 52(1) EPC) since the invention is not "susceptible of industrial application" (see Guidelines G-III, 1).

Examples

The following are examples of inventions which are contrary to the physical laws of nature: a vehicle moving faster than the speed of light, a perpetual motion machine, a time machine, a device for cold nuclear fusion, or an apparatus for measuring Chi energy.

Legal references:

GL F-III, 3, CL Book II.C.9

7. Trademarks

One problem with trademarks is that the compositions of trademark products may be modified during the term of a patent.

Therefore, trademark products used in claims must be sufficiently identified to enable the invention to be carried out by the skilled person at the filing date.

However, internationally accepted trademark products having a precise meaning may be allowed in claims.

Examples

Accepted trademarks: "Nylon", "Coca-Cola", "Bowden" cable, "Belleville" washer, "Panhard" rod, "Caterpillar" track

Legal references:

GL F-III, 7.

8. Beyond the course

You can deepen what you have learned during this course with the following further readings:

- The Guidelines for Examination, F-III, sections 1 to 12 (further details of Sufficiency of Disclosure).
- Guidelines for Examination, G-IV, 2 (enabling disclosures).
- Case Law of the Boards of Appeal of the EPO.II.C (sections 1 to 9 relate to sufficiency of disclosure).

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