

Specific Requirements of Patentability

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Steffen Wolf, European Patent Office, Munich, Germany



Outline

- **Technical Nature - Art. 52(1), (2) EPC**
- Exceptions from Patentability - Art. 53 EPC
- Unity - Art. 82 EPC
- Sufficiency of Disclosure - Art. 83 EPC
- Additions to original Disclosure - Art. 123(2) EPC

Technical Nature

European Patent Convention:

- Art. 52(1) EPC:
"European patents shall be granted for any inventions, **in all fields of technology**, provided that they are new, involve an inventive step and are susceptible of industrial application."

Implementing Regulations:

- Rule 42(1) requires that the description specifies the technical field of the invention and discloses the invention in terms such that the **technical problem** and its solution can be understood, i.e. a technical problem has to be solved.
- Rule 43(1) requires that claims define the matter for which protection is sought in terms of **technical features** of the invention.

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Technical Nature

- Art. 52(2) EPC:
"The following in particular **shall not be regarded as inventions** within the meaning of paragraph 1:
(a) discoveries, **scientific theories** and mathematical methods;
(b) aesthetic creations;
(c) schemes, rules and **methods** for performing mental acts, playing games or **doing business**, and **programs for computers**;
(d) presentations of information."
- Art. 52(3) EPC:
"Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities **as such**."
- More details defined by Case Law

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Exceptions to Patentability

Art. 53 EPC

European patents shall not be granted in respect of:

Art. 53(a) EPC



Inventions whose commercial exploitation would be contrary to **ordre public or morality**

e.g. Processes for cloning human beings (R.28 EPC)

Art. 53(b) EPC



Plant or animal **varieties**, or **essentially biological** processes for the production of plants or animals

e.g. Human body or parts thereof (R.29 EPC)

Art. 53(c) EPC



Surgical or therapeutic treatment of or diagnostic methods practised on **humans** or **animals**

e.g. Methods of surgery on humans

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Unity - Art. 82 EPC

- Art. 82 EPC
"The European patent application shall relate to **one invention only** or to **a group of inventions** so linked as to form **a single general inventive concept**."

There must be **a fair balance** between the fees paid by the applicant and the work produced by the patent office.

2 inventions to search and
examine



1 search fee

work produced by the
patent office



fees paid by the
applicant

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Unity - Plural inventions

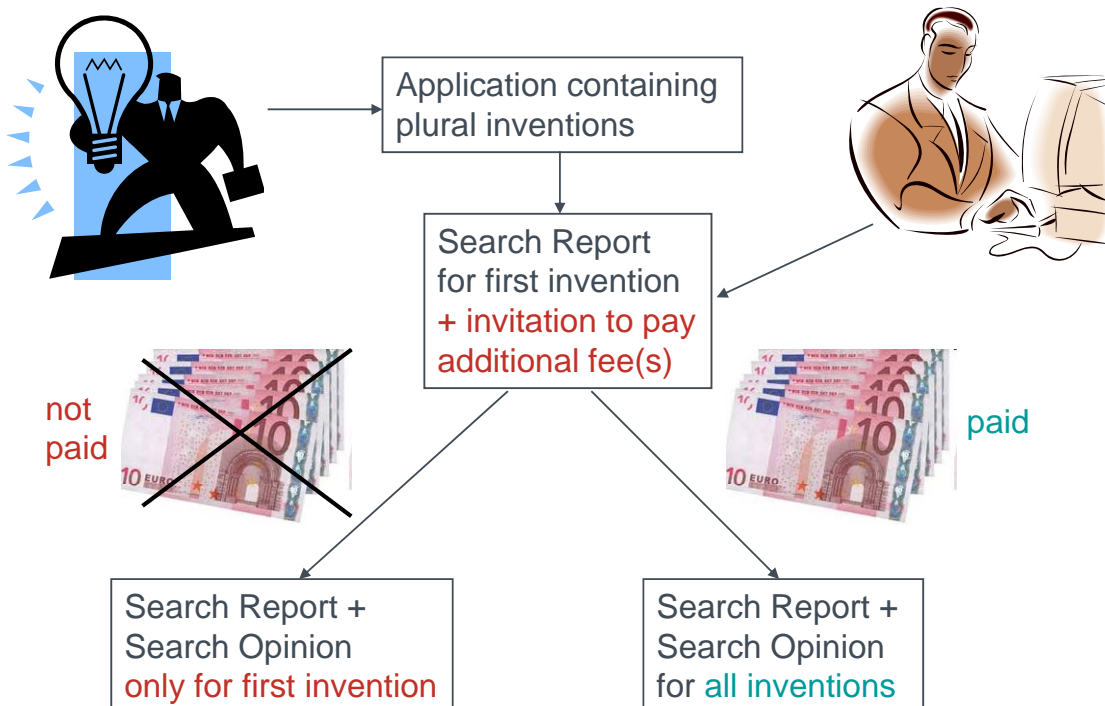
Nothing in the EPC stops the applicant to file 2 unrelated inventions in one application !

- Claim 1: a Swiss army knife with a laser pointer
- Claim 2: a Swiss army knife with a USB memory stick



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Unity



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Unity - Partial Search Report

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	US 6 238 386 B1 (MUELLER GERHARD [DE] ET AL) 29 May 2001 (2001-05-29) * column 7, line 53 - column 8, line 45; figures 4, 7 *	1-3,5-6 4
X	EP 0 435 506 A2 (PFIZER HOSPITAL PROD [US]) 3 July 1991 (1991-07-03) * column 1, line 1 - column 6, line 21; figures 1-4 *	1-3,5-6 4
X	US 2005/256516 A1 (BOUTOUSSOV DMITRI [US]) 17 November 2005 (2005-11-17) * paragraphs [0027] - [0039]; figure 1 *	1,3,5
X	EP 0 717 296 A1 (CERAMOPTEC GMBH [DE]) 19 June 1996 (1996-06-19) * column 4, line 16 - column 5, line 28; figures 1, 2 *	1,3,5
A	US 5 815 627 A (HARRINGTON JAMES A [US]) 29 September 1998 (1998-09-29) * column 10, line 38 - column 13, line 46; figures 9-12 *	1-6

LACK OF UNITY OF INVENTION		
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:		
see sheet B		

Place of search Munich	Date of completion of the search 3 February 2010	Examiner Wolf, Steffen
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6
Central core waveguide with additional fibers in the covering

2. claims: 7-15
Hollow core waveguide with proximal and distal portion and coupling unit

The prior art has been identified as: US 6 238 386 (D1).
D1 discloses a radiation system comprising: a waveguide (13) to direct radiation from a first radiation source (7; column 7, lines 55-58); a covering (14, 15) to cover at least part of the waveguide (Fig. 4); and one or more optical fibers (12) embedded in the covering to direct radiation from a second radiation source (Fig. 4; column 7, line 64). The waveguide according to D1 comprises a hollow waveguide (column 8, lines 18-23) to direct radiation emitted by a Nd:YAG laser source (column 7, line 56). The CO₂-laser is a well-known alternative to the Nd:YAG laser for providing high power infrared radiation which the skilled person would choose with no inventive activity involved. The one or more optical fibers according to D1 are embedded in the covering such that radiation emitted by the one or more optical fibers defines one of a ring and or a spot on a target area onto which the radiation from the first radiation source directed by the waveguide is applied (Fig. 4).
Claims 1-6: From a comparison of the disclosure of D1 and the technical features of claims 1-6 it can be seen, that the following technical features of these claims can be seen to make a contribution over D1 (Special Technical Features (STF), (Art. 82, Rule 44 EPC)): A second radiation source, the second radiation source comprising a source to generate visible radiation. From this STF the objective problem to be solved by the subject-matter of claims 1-6 can be construed as: Providing radiation with different wavelengths in a system with separate paths.

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Unity

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A	US 5 815 627 A (HARRINGTON JAMES A [US]) 29 September 1998 (1998-09-29) * column 10, line 38 - column 13, line 46; figures 9-12 *	1-6
X	GB 2 288 469 A (HITACHI CABLE [JP]; MIYAGI MITSUNOBU [JP]; MORITA MFG [JP]) 18 October 1995 (1995-10-18) * page 23, line 4 - page 26, line 9; figures 1, 3, 7 *	7-12
X	US 2006/190006 A1 (OKA KIYOSHI [JP] ET AL) 24 August 2006 (2006-08-24) * the whole document *	7-11
A	US 5 123 845 A (VASSILIADIS ARTHUR [US] ET AL) 23 June 1992 (1992-06-23) * the whole document *	1-15

Place of search Munich	Date of completion of the search 6 April 2010	Examiner Wolf, Steffen
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First Invention

Second Invention

additional fees paid

Unity - Assessment by Special Technical Features (STF)

- Rule 44(1) EPC - How to assess Unity
Where a group of inventions is claimed in a European patent application, **the requirement of unity of invention** under Article 82 **shall be fulfilled** only when there is a technical relationship among those inventions involving **one or more of the same or corresponding special technical features**.

The expression "special technical features" shall mean **those features which define a contribution** which each of the claimed inventions considered as a whole makes **over the prior art**.

- Rule 44(2) EPC:
The **determination** whether a group of inventions is so linked as to form a single general inventive concept **shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim**.

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Unity - Example

- Claim 1: a multi-function pocket knife (A) with a **USB memory stick (B)**
- Claim 2: a multi-function pocket knife (A) with a **laser pointer (C)**

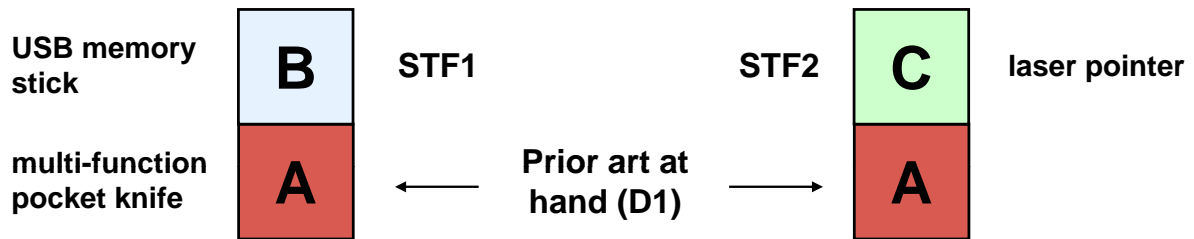


- Claim 1: A+B
Claim 2: A+C

Special Technical Feature (STF):
Technical features that make the claim novel and inventive over the prior art

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Unity - Example



Problem 1: the USB memory stick solves the problem of how to modify a multi-function pocket knife as in D1 in order to carry data electronically.

Problem 2: the laser pointer solves the problem of how to modify a multi-function pocket knife as in D1 in order to point at a distance.

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Unity - Example

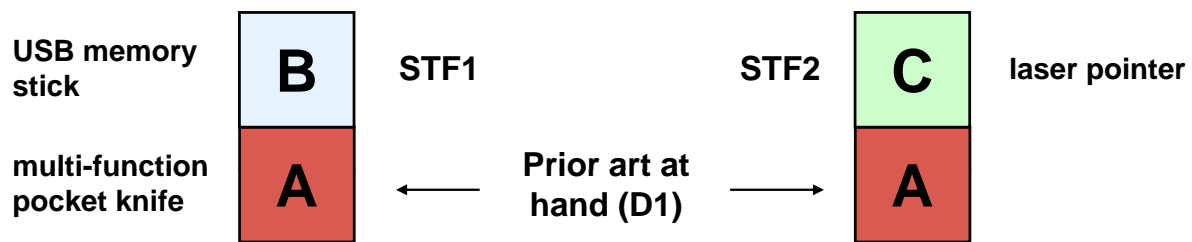
Question: are STF1 for claim 1 (B) and STF2 for claim 2 (C) **"same or corresponding"**?

Same means identical.

Corresponding means equivalent, i.e. providing the same effect (solving the same problem in view of D1).

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Unity - Example



Problems 1 and 2 are distinct and STF1 and STF2 are therefore not corresponding.

⇒ lack of unity
 ⇒ 2 groups of inventions
 Invention I: A+B
 Invention II: A+C

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Unity in PCT - Rule 13

- 13.1. Requirement (corresponding to Art. 82 EPC)**
 The international application shall relate to **one invention** only or to a **group of inventions** so linked as to form a **single general inventive concept** ("requirement of unity of invention").
- 13.2. Circumstances in Which the Requirement of Unity of Invention Is to Be Considered Fulfilled (corresponding to Rule 44(1) EPC)**
 Where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the **same or corresponding special technical features**. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.
- 13.3. Determination of Unity of Invention Not Affected by Manner of Claiming (corresponding to Rule 44(2) EPC)**
 The determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim.

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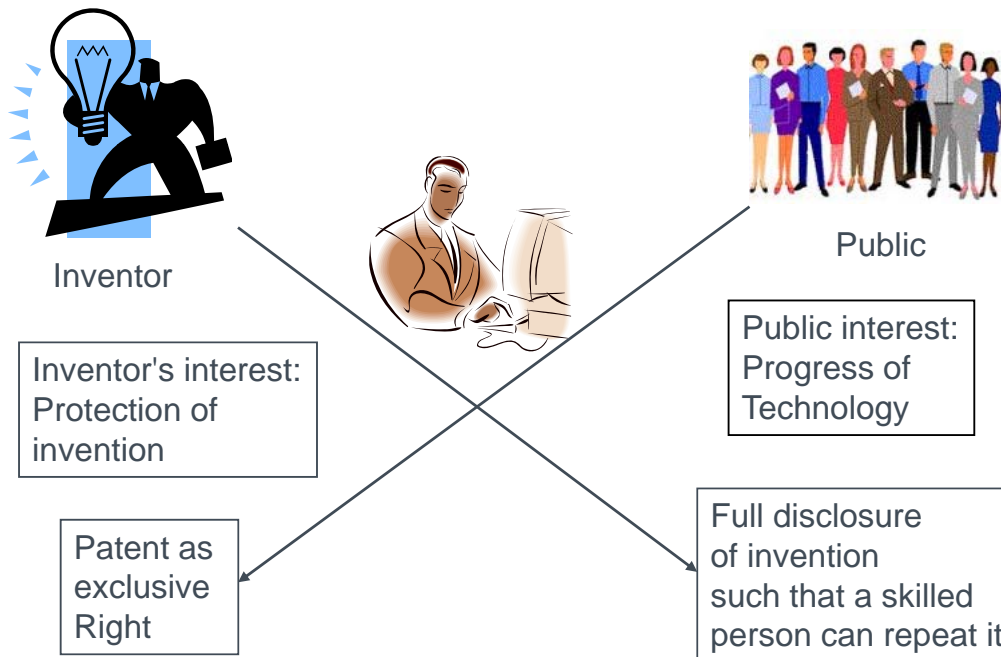
Sufficiency of disclosure - Art. 83 EPC

- Art. 83 EPC
"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.**"
- Under the EPC, sufficiency of disclosure must be assessed on the basis of the **application as a whole**, including the description, claims and drawings, if any.
- Neither the abstract nor the priority document are relevant to disclosure in the original document of an application.
- Under the PCT, the disclosure has to be contained completely in the description (Art. 5 PCT).

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Sufficiency of disclosure - underlying principle

- Patents should support innovation and progress

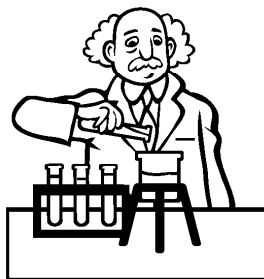


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Sufficiency of disclosure - skilled person

When assessing sufficiency of disclosure

the **person skilled in the art** is considered to be the **ordinary practitioner** aware of:

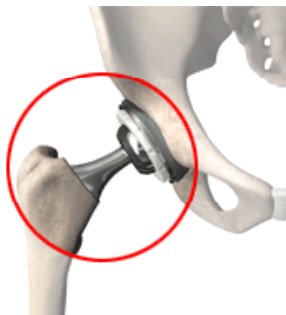


1. **common general knowledge** in the art at the date of filing the application
2. the **teaching of the application** itself
3. the **references** in the application (document cited in the application)

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Sufficiency of disclosure - difficult inventions

- An invention **highly difficult to perform** does not prevent the person skilled in the art to put the invention as claimed into practice.
- Thus an objection under Art. 83 should not be raised merely because the invention is difficult to perform



Example: an artificial hip joint could only be fitted by a surgeon of above-average ability. The application nevertheless fulfils the requirements of Art 83 EPC.

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Sufficiency of disclosure - Rule 42

Specific requirements for the description:

- specify the **technical field** to which the invention relates
- indicate the **background art** which, as far as is known to the applicant
- disclose the invention, in such terms that the **technical problem** and its solution can be understood, and state any **advantageous effects** of the invention with reference to the background art;
- describe in detail **at least one way of carrying out the invention** must be given.
- For a **broad field**, the application should give **a number of examples/embodiments** extending over the area protected by the claims.
- A **single example or embodiment may suffice** if the application contains sufficient information to allow the person skilled in the art to perform the invention **over the whole area**.
- US patent law: **Best mode** requirement - not in EPC

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Additions to original disclosure - Art. 123 EPC

- Art. 123(1) EPC: The right to amend
"The European patent application or European patent may be amended in proceedings before the European Patent Office, in accordance with the Implementing Regulations. In any event, **the applicant shall be given at least one opportunity to amend the application** of his own volition."
- Rule 70a, 137 EPC:
Opportunity to amend the description, claims and drawing after receipt of the Extended European Search Report and/or after communication from the examining division
- Rule 71(3) EPC:
Patent office informs the applicant about **text for grant** - Opportunity to request amendments in response to this communication

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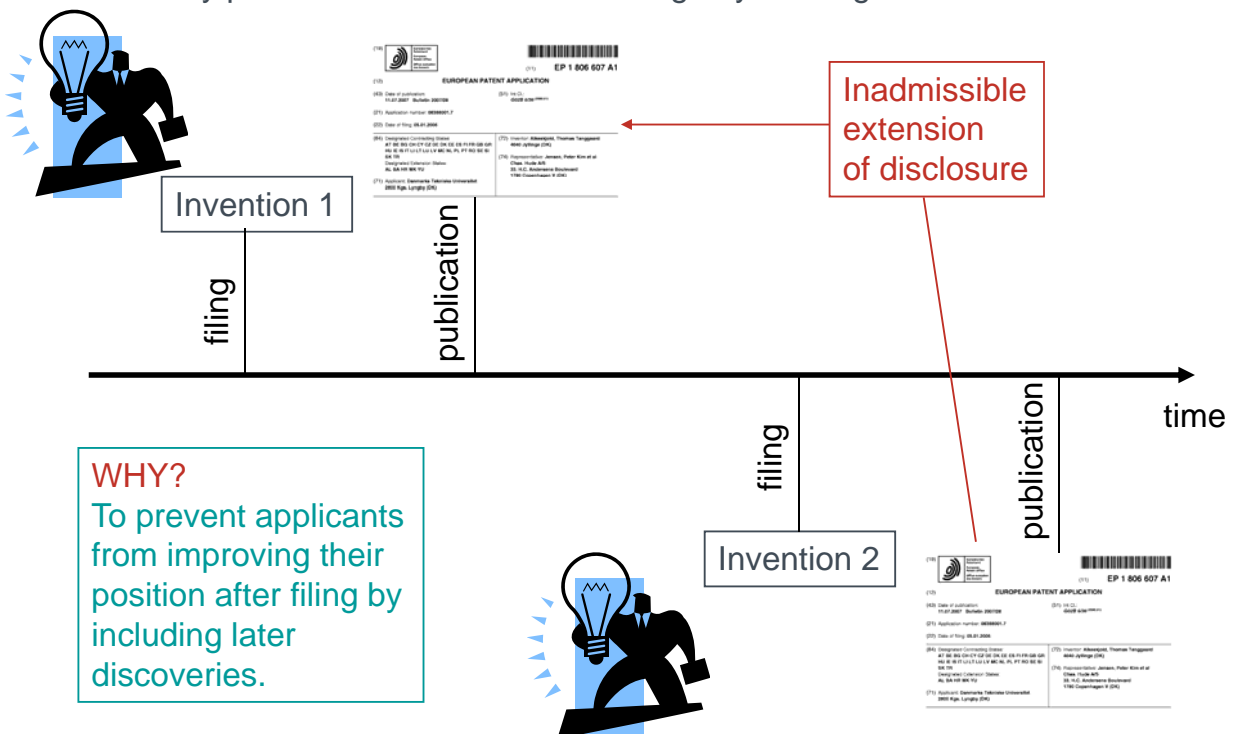
Additions to original disclosure - Art. 123 EPC

- Art. 123(2) EPC: How to amend
 "The European patent application or European patent **may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.**"
- Art. 123(3) EPC: How to amend granted patent (e.g. in opposition)
 "The European patent **may not be amended in such a way as to extend the protection** it confers."

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Additions to original disclosure

- Why prohibit amendments extending beyond original disclosure ?



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Additions to original disclosure

- GUIDELINES for examination, C-VI, 5.3.1:
An amendment should be regarded as introducing subject-matter which extends beyond the content of the application as filed, and therefore unallowable, if the overall change in the content of the application (whether by way of addition, alteration or excision) results in the skilled person being presented with information which is not **directly** and **unambiguously derivable** from that previously presented by the application, even when account is taken of matter which is implicit to a person skilled in the art.

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Additions to original disclosure - novelty test

How it works

The **amendment** is compared against the application as **originally filed**:

If it is **new**, then the amendment goes beyond the original content of the application and the amendment is **not allowable**.

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Additions to original disclosure

- Normally not objectionable under Art. 123(2) EPC:
 - Incorporating **dependent claims into independent claim** - unless dependency changed
 - Amendments taken word by word from the description - unless taken out of context
- Often problematic:
 - Amendments only based on schematic figures
 - Generalisations

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Additions to original disclosure

Original claim: A method of operation of a distillation column including the following steps [...] measuring the pressure drop between the top and the bottom of the column at the first entry into operation of the column.

Granted claim: A method of operation of a distillation column including the following steps [...] measuring the pressure drop between the top and the bottom of the column at the entry into operation of the column.

No further information was available in the description as to when the pressure drop measurement could be performed.

Does granted claim fulfil the requirements of Article 123(2) EPC?

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Additions to original disclosure

Answer:

While the original claim was limited to the measuring of the pressure drop only at the "first" entry into operation of the column, the granted claim was extending this procedure at "any" subsequent entry into operation of the column, e.g. after maintenance.

Since there is no basis for such an extension in the application as filed, granted claim does not meet the requirements of Article 123(2) EPC.

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The End

- **Thank you very much for your attention**

Questions ?



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