

# Learning path for patent examiners

# Clarity: Intermediate level

Version: May 2024



### Introduction

This publication, "Clarity, Intermediate 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.

### **Disclaimer**

This publication is for training and information purposes only. Although it has been prepared with great care, it cannot be guaranteed that the information it contains is accurate and up to date; nor is it meant to be a comprehensive study or a source of legal advice. The EPO is not liable for any losses, damages, costs, third-party liabilities or expenses arising from any error in data or other information provided in this publication.

The opinions expressed in this publication are not necessarily those of the EPO.

This publication may be used and reproduced for non-commercial purposes, provided that the EPO and the contributors are appropriately acknowledged. Reproduction for commercial purposes is not permitted.

All references to natural persons are to be understood as applying to all genders.

### Contents

1.	Learning objectives	5
2.	Approximate terms in claims	5
3.	Inconsistencies between claims and description	6
4.	Result to be achieved	10
5.	Essential features	11
6.	Negative limitations, e.g. disclaimers	15
7.	Reference in a claim to another claim	16
8.	No meaningful search possible	17
9.	Interpreting claims	20
10.	"Comprising" vs "consisting of"	21
11.	Optional features	22
12.	Reference signs and text in parentheses	22
13.	Claims not supported by the description	23
Lega	al references	
GL F-IV, 4.7.1, GL F-IV, 4.7.2		6
GL F-IV, 4.3		9
R. 43 EPC, GL F-IV, 4.10		11
R. 43(3) EPC, GL F-IV, 4.5.1, GL F-IV, 4.5.2, GL F-IV, 4.5.3		15
R. 42(1)(b) EPC, GL F-IV, 4.19		16
R. 43(1) EPC, GL F-IV, 3.8		17
R. 63 EPC, GL B-VIII, 3		20
Art. 69 EPC and its protocol, GL F-IV, 4.2		21
GL F-IV, 4.20		22
GL F-IV, 4.9 GL F-IV, 4.18		22
GL F-	17, 4.10	23
		3

### 1. Learning objectives

Participants to this course will learn:

- intermediate-level reasons for raising a lack of clarity
- advanced aspects of claim interpretation and assessment of scope
- the meaning of support by the description

### 2. Approximate terms in claims

A value or a range is interpreted as being as accurate as the method used to measure it.

If no error margins are specified in the application, the expression "about 200°C" is interpreted as having the same round-off as "200°C". If error margins are specified in the application, they must be used in the claims in place of the expression containing "about" or similar terms. Accordingly, an objection of lack of clarity is raised.

The skilled person knows that numerical values relating to measurements are subject to measurement errors which place limits on their accuracy. For this reason, the general convention in the scientific and technical literature is applied: the last decimal place of a numerical value indicates its degree of accuracy. Where no other error margins are given, the maximum margin is ascertained by applying the rounding-off convention to the last decimal place, e.g. for a measurement of 3.5 cm, the error margin is 3.45-3.54. When interpreting ranges of values in patent specifications, the skilled person proceeds on the same basis.

An expression containing the term "substantially" or "approximately" is interpreted as a technical feature being produced within the technical tolerance of the method used for the manufacture.

For example, the expression "a tray plate with a substantially circular circumference" is interpreted as claiming the same technical feature as "a tray plate with a circular circumference", i.e. any tray with a base that the skilled person in the manufacturing field would consider circular.

If the application suggests that the use of terms such as "about", "approximately" or "substantially" extends either the interval claimed by a value and/or range outside the error margins of the measurement system or the structural unit beyond the manufacturing tolerances, then the wording becomes vague and undefined, i.e. the application does not fulfil the requirement of clarity, because its presence prevents the invention from being unambiguously distinguished from the prior art with respect to novelty and inventive step.

### **Examples**

### Example 1: An example of an unclear approximate term

If the application suggests that an icosagon (20-sided polygon) is also a "substantially circular circumference" for a metal tray produced by a computer numerical control (CNC) waterjet cutting machine, this renders the scope of the claims unclear because:

 the tolerance indicated by the application is outside the tolerance of the manufacturing method (a CNC waterjet cutting machine approximates a circular circumference by using a polygon with hundreds of sides); and • if an icosagon is also a "substantially circular circumference", what about an enneadecagon (19-sided polygon) or an octadecagon (18-sided polygon)? When does a polygon stop being a "substantially circular circumference"? How can this be assessed objectively by the person skilled in the art?

### Legal references:

GL F-IV, 4.7.1, GL F-IV, 4.7.2

### 3. Inconsistencies between claims and description

Any inconsistency between the description and the claims must be avoided since it throws doubt on the extent of protection and therefore render the claim unclear or unsupported under <u>Article 84 EPC</u>.

### **Examples**

### **Example 1: Verbal inconsistencies**

One example is when wood appears in a list of metals.

Another example is when a statement in the description suggests that the invention is limited to a particular feature but the claims are not thus limited; the description places no particular emphasis on this feature either and there is no reason for believing that the feature is essential for the performance of the invention. In these cases, the inconsistency can be removed either by broadening the description or by limiting the claims. Similarly, if the claims are more limited than the description, the claims may be broadened or the description may be limited. See also point (iii) below.

### **Example 2: Inconsistency regarding apparently essential features**

For example, it may appear, either from general technical knowledge or from what is stated or implied in the description, that a certain described technical feature not mentioned in an independent claim is essential to the performance of the invention, or, in other words, is necessary for the solution of the problem to which the invention relates. In these cases, the claim does not meet the requirements of <a href="Article 84 EPC">Article 84 EPC</a> because <a href="Article 84">Article 84</a>, <a href="first sentence">first sentence</a>, <a href="EPC">EPC</a>, when read in conjunction with <a href="Rule 43(1)">Rule 43(1)</a> and <a href="(3) EPC">(3) EPC</a>, has to be interpreted as meaning not only that an independent claim must be comprehensible from a technical point of view but also that it must clearly define the subject-matter of the invention, that is to say indicate all the essential features thereof. The opposite situation in which an independent claim includes features which do not seem essential for the performance of the invention is not objectionable. This is a matter of the applicant's choice.

## Example 3: Part of the subject-matter of the description and/or drawings is not covered by the claims

Where parts of the description give the reader the impression that they disclose ways to carry out the invention but are not or, due to amendments to the claims, are no longer encompassed by the wording of the claims, these parts often throw doubt on the scope of protection and therefore render the claims unclear or unsupported under <u>Article 84 EPC</u>. The description must be adapted to the claims in order to avoid inconsistencies between the claims and the description.

Embodiments in the description which are no longer covered by the independent claims must be deleted (for example if the description includes an alternative for at least one feature which is no

longer covered by the amended claims) unless these embodiments can reasonably be considered to be useful for highlighting specific aspects of the amended claims. In these cases, the fact that an embodiment is not covered by the claims must be prominently stated.

For example, if the claims are amended to specify a vehicle employing electric motors but one of the embodiments in the description and drawings employs a combustion engine instead, the inconsistency can be rectified by removing the embodiment with the combustion engine from the description and drawings. Alternatively, this embodiment must be marked as not being covered by the claimed invention (e.g. "embodiment not covered by the claimed invention"). It is not sufficient to use generic statements such as "embodiments not falling under the scope of the appended claims are to be considered merely as examples suitable for understanding the invention" without indicating which parts of the description are no longer covered.

In addition, merely changing the wording "invention" to "disclosure" and/or the wording "embodiment" to "example", "aspect" or similar is not sufficient to clearly state that this part of the description does not fall under the scope of the claimed invention. It has to be explicitly specified that this part of the description does not describe part of the claimed invention.

Similarly, subject-matter in the description being excluded from patentability needs to be excised, reworded such that it does not fall under the exceptions to patentability or prominently marked as not being according to the claimed invention.

Moreover, features required by the independent claims may not be described in the description as being optional using wording such as "preferably", "may" or "optionally". The description must be amended to remove such terms when preceding a feature of an independent claim.

Example: the claims all specify an electric circuit using semiconductor devices but one of the embodiments in the description and drawings uses electronic tubes instead. This means that a part of the subject-matter of the description and/or drawings is not covered by the claims. The inconsistency can be removed by broadening the claims or by removing the "excess" subject-matter from the description and drawings.

#### **Example 4: General statements**

General statements in the description which imply that the extent of protection may be expanded in some vague and not precisely defined way are not allowed. In particular, any statement which refers to the extent of protection being expanded to cover the "spirit of the invention" or "all equivalents" of the claims must be deleted.

Only statements that refer to the extent of protection covering the "scope of the claims" may be allowed.

Analogously, in the case where the claims are directed to a combination of features, any statement that seems to imply that protection is nevertheless sought not only for the combination as a whole but also for individual features or sub-combinations of these must be deleted.

### **Example 5: Claim-like clauses**

The term "claim-like clauses" means clauses present in the description which use claim language such as "according to the preceding clause", "according to clause 1", "characterised in that", "further comprising" and so on. These claim-like clauses are usually found at the end of the description

and/or in the form of numbered paragraphs. They are often found in divisional applications where the original set of claims from the parent application is appended to the description.

Claim-like clauses must be deleted or amended to avoid claim-like language prior to grant because:

- They are inconsistent with the claimed subject-matter; they lead to unclarity as to the actual scope of protection and hence do not fulfil the requirements of <u>Article 84 EPC</u>.
- They only repeat the claimed subject-matter in a very literal manner; they are an irrelevant and unnecessary reduplication and hence do not fulfil the requirements of Rule 48(1)(c) EPC.

### **Further examples:**

### **Example 1**

Description: a mobile telephone handset is described and is shown in the drawings as comprising a patch antenna integrated in the casing of the handset.

Claim: a mobile telephone handset comprising a casing and an extractable antenna mounted on the right-hand side of the casing.

The claim as such is clear but is inconsistent with the description and the drawings.

### Example 2

Description: "It will be understood by those of ordinary skill in the art that the above-described embodiments of the present invention may be modified or adapted to accommodate specific applications. For example, although the coaxial bore has been described as having a circular cross section, other geometric cross sections may be used for some applications."

Amended claim: an antenna assembly comprising a rod antenna, a transition structure characterised in that the structure has a coaxial bore which is circular in cross section.

File history: the original application includes several embodiments of a device.

During examination, the applicant amends the claim and limits itself to one embodiment of the device only. The description is not amended accordingly.

The description contradicts the new claims. The inconsistency between the claims and the description leads to doubts concerning the matter for which protection is sought. The applicant will be requested to remove the inconsistency by deleting the excess subject-matter from the description and the drawings or by indicating in the description that the embodiments concerned do not form part of the invention but rather represent background art useful for understanding the invention.

### **Example 3 (no solution provided)**

Description: a high-pressure discharge lamp comprising a specific filling of metal halides and xenon at a cold filling pressure of 9 to 13 MPa. The application notes that the problem of how to obtain a desired colour temperature and a reasonable lifetime cannot be solved when the Xe pressure exceeds the given range. A comparative example with P(Xe) = 18 MPa is given.

Claim: a high-pressure discharge lamp comprising a bulb and two oppositely arranged electrodes extending into the bulb, characterised in that the bulb is filled with a filling consisting of iodides of Na, Sc and In and further Xe at a cold filling pressure of at least 9 MPa.

### Example 4

The original set of claims contains a product and a method. The product is not new but the method is novel and inventive. A new set of claims is filed with only the method. The description is not amended.

Inconsistency between the claims and description may cast doubt on the scope of protection that the applicant is seeking. In this case, the description must be directed to a method only. Embodiments can be renamed as further examples in the description. It should be noted that deleting embodiments instead of renaming them might be difficult or even impossible for the applicant, especially in the drawings. Deleting embodiments from the description might also be time-consuming and likely to introduce unallowable amendments under Article 123(2) EPC.

### Example 5

The original set of claims contains a product. An objection is raised because the applicant mixed categories and the claim should in fact be directed to a method. A new set of claims is filed with a method. The description is not amended.

Inconsistency between the claims and description may cast doubt on the scope of protection that the applicant is seeking. The description must be directed to a method. It should be noted that deleting embodiments instead of renaming them might be difficult or even impossible for the applicant, especially in the drawings.

Deleting embodiments from the description might also be time-consuming and likely to introduce unallowable amendments under Article 123(2) EPC.

### Example 6

In the parent application, the invention was presented as A+B and A+C. An objection of lack of unity was raised and A+C is now the subject-matter of a divisional application. The description has not been adapted accordingly.

Inconsistency between the claims and description may cast doubt on the scope of protection that the applicant is seeking. The description of the parent application must be modified in order to exclude unclaimed subject-matter as being part of the invention. Embodiments (A+B) can be renamed as further examples in the description. It should be noted that deleting embodiments instead of renaming them might be difficult or even impossible for the applicant, especially in the drawings. Deleting embodiments from the description might also be time-consuming and likely to introduce unallowable amendments under Article 123(2) EPC.

Legal references:

GL F-IV, 4.3

### 4. Result to be achieved

The area defined by the claims must be as precise as the invention allows. As a general rule, claims which attempt to define the invention by a result to be achieved are not allowed, in particular if they only amount to claiming the underlying technical problem.

However, these claims may be allowed if the invention either can only be defined in such terms or cannot otherwise be defined more precisely without unduly restricting the scope of the claims and if the result is one which can be directly and positively verified by tests or procedures adequately specified in the description or known to the person skilled in the art and which do not require undue experimentation.

However, these cases have to be distinguished from those in which the product is defined by the result to be achieved and the result amounts in essence to the problem addressed by the application. Independent claims must indicate all the essential features of the object of the invention in order to comply with the requirements of clarity. <u>Article 84 EPC</u> also reflects the general legal principle that the extent of monopoly conferred by a patent, as defined in the claims, must correspond to the technical contribution to the art. It must not extend to subject-matter which, after reading the description, would still not be at the disposal of the person skilled in the art.

The technical contribution of a patent resides in the combination of features which solve the problem addressed by the application. Therefore, if the independent claim defines the product by a result to be achieved and the result amounts in essence to the problem addressed by the application, that claim must state the essential features necessary to achieve the result claimed.

The above-mentioned requirements for allowing a definition of subject-matter in terms of a result to be achieved differ from those for allowing a definition of subject-matter in terms of functional features.

#### **Examples**

- 1. "A car engine characterised in that the cylinders are designed to enable the car to cover at least 90 km per litre of fuel" is a claim defining an unallowable result to be achieved how is the engine built?
- 2. "A pill characterised in that it cures tonsillitis" is a claim defining an unallowable result to be achieved what is in the pill?
- 3. "Method for compressing audio data yielding better quality than MP3 coding" is a claim defining an unallowable result to be achieved what does the code look like?
- 4. The invention relates to an ashtray in which a smouldering cigarette end will be automatically extinguished due to the shape and relative dimensions of the ashtray, which may vary considerably in a manner difficult to define while still providing the desired effect. So long as the claim specifies the construction and shape of the ashtray as clearly as possible, it may define the relative dimensions by reference to the result to be achieved, provided that the specification includes adequate directions to enable the skilled person to determine the required dimensions by routine test procedures.
- 5. Claim: a digital photo camera comprising a very large-scale integration processing unit and adapted to be operated at very low temperatures.

The photo camera is defined in terms of the object to be achieved – operation at very low temperatures – rather than in terms of the technical features (e.g. a special coating of the casing or the presence of heaters that are automatically switched on when the external temperature falls below a predetermined threshold) that allow the desired object to be actually achieved.

6. Claim: a surround-sound system for reproducing a sound track, the sound track having left, right and surround-sound channels and being equalised for playback according to the standard theatre X-curve, the surround-sound system being characterised in that it includes means for reequalising said left and right sound channels to compensate for said X-curve equalisation.

The re-equalising means is defined in terms of the object to be achieved (i.e. compensating for the X-curve) as there is no specification of which features of the re-equalising means allow the compensation to be brought about.

7. Claim: a surround-sound system for reproducing a sound track, the sound track having left, right and surround-sound channels and being equalised for playback according to the standard theatre X-curve, the surround-sound system being characterised in that it includes means for reequalising said left and right sound channels to compensate for said X-curve equalisation and in that the re-equalising means has a transfer characteristic of a low-pass filter with a characteristic response that is flat up to 5 kHz, rolls off between 5 and 10 kHz and is flat above 10 kHz.

The re-equalising means specifies the technical features that allow the desired effect (i.e. compensating for the X-curve) to be actually achieved.

8. Claim: a device for dispensing ice cream [...] characterised in that it comprises means for automatically reducing the flow rate as the external temperature drops.

Functional features are allowable provided that a person skilled in the art would have no difficulty in providing several ways of performing this function. The feature "means for automatically reducing the flow rate as the external temperature drops" merely represents a result to be achieved and the structural characteristics that would allow a skilled person to achieve that desired result are not specified. If the description is silent on the structure of the means, the applicant will be requested to delete the claim. If the description specifies the structure of the means, the applicant will be requested to add the means to the claims.

Legal references:

R. 43 EPC, GL F-IV, 4.10

### 5. Essential features

The claims, which define the matter for which protection is sought, must be clear. This means not only that a claim must be comprehensible from a technical point of view, but also that it must define clearly all the essential features of the invention. Furthermore, the requirement of <u>Article 84 EPC</u> that the claims be supported by the description applies to features which are explicitly presented in the description as being essential for carrying out the invention. A lack of essential features in the independent claim(s) is therefore to be dealt with under the clarity and support requirements.

Essential features of a claim are those necessary for achieving a technical effect underlying the solution of the technical problem with which the application is concerned (the problem usually being

derived from the description). The independent claim(s) must therefore contain all features explicitly described in the description as being necessary to carry out the invention. Any features which, even if consistently mentioned in the context of the invention throughout the application, do not actually contribute to the solution of the problem are not essential features.

As a general rule, the technical effect or result produced by a feature will provide the key to answering the question of whether or not this feature contributes to solving the problem. In this respect, when the application contains examples according to the invention, these examples might be useful for assessing what are the essential features for carrying out the invention. For example, if it can be derived from the examples that a particular feature is present in <u>all</u> the examples according to the invention (e.g. a certain ingredient in a composition of compounds or a range for an ingredient present in such composition), this might be a strong hint that this feature is essential to the definition of the invention. If this feature is not present in the independent claim, then an objection for lack of essential features under Art. 84 EPC may be raised by explaining why, in view of the examples contained in the application, this feature seems to be essential.

If a claim is directed to a process for producing the product of the invention, then the process as claimed must be one which, when carried out in a manner which would seem reasonable to a person skilled in the art, necessarily has as its end result that particular product; otherwise there is an internal inconsistency and therefore lack of clarity in the claim.

Where patentability depends on a technical effect, the claims must be so drafted as to include all the technical features of the invention which are essential for obtaining the technical effect.

In deciding how specific the essential features must be, the provisions of <a href="Article.83 EPC">Article.83 EPC</a> must be borne in mind: it is sufficient if the application as a whole describes the necessary characteristics of an invention in a degree of detail such that a person skilled in the art can perform the invention. It is not necessary to include all details of the invention in the independent claim. A certain degree of generalisation of the claimed features may thus be permitted, provided that the claimed generalised features as a whole allow the problem to be solved. In this case, a more specific definition of the features is not required. This principle applies equally to structural and functional features.

### **Examples**

### Example 1

Claim 1 relates to a method for storing gel-coated seeds having a gel coat comprising an aqueous gel having been made water-insoluble by a metal ion. The method is characterised by storing the gel-coated seeds in an aqueous solution containing said metal ion. The description specifies the object of the invention as that of providing a method for storing gel-coated seeds easily without causing any reduction in yield and handling properties. The description emphasises that it is necessary to confine the metal ion concentration to a specific range in order to achieve the goals of the invention. A metal ion concentration outside the specific range was presented as negatively influencing yield and handling properties. The subject-matter of claim 1 – which does not indicate the specific range – therefore does not solve the problem stated in the description.

### **Example 2**

The invention relates to an apparatus for concavely shaping a metal strip. In the closest prior art, the metal strip is passed transversely to its length through a shaping set of rollers at which the concave

shape is applied to the strip. According to the description, the problem is that the rollers are unable to subject the lateral ends of the strip to a curve-creating force, so the lateral ends normally end up planar. The distinguishing feature of the independent claim specifies that a flexible belt or web-like member is provided to support the strip in its passage through the shaping set of rollers. This feature is sufficient to solve the problem. Further features, e.g. the details of the mechanism for advancing the strip into the shaping set of rollers or the provision of at least three rollers, are not necessary to solve the problem – these additional features would unduly restrict the claim.

### Example 3

Claim 1 is directed to an apparatus for coding television signals, comprising, amongst other features, a parameter-generating means which ensures that the error between the pixel data of the predicted and actual current fields is minimised. The description describes only one example for minimising the error, namely a method of least squares. What is important is that the skilled person would be able to see how to implement the error-minimising function – it is irrelevant in this context whether the method of least squares is the only method applicable. It is therefore not necessary to further restrict the claimed parameter-generating means to the effect that it uses a method of least squares.

### Example 4

The description states that a compound C is obtained by reacting a mixture of A and B for at least 10 minutes at 100°C. It is emphasised that A and B must be reacted for this minimum amount of time, otherwise the reaction will be incomplete and C will not be formed. Claim 1 is directed to a process for producing compound C, characterised by reacting a mixture of A and B for 5-15 minutes at 100°C. The claim does not contain all the essential features of the invention as the description clearly states that for the reaction to be complete, A and B have to be reacted for at least 10 minutes.

### Example 5

The description identifies the problem to be solved as providing aerosol compositions in which the percentage of undesirable volatile organic compounds (VOCs) required as the propellant is dramatically decreased, resulting in less VOC release to the atmosphere. Claim 1 specifies the minimum amount of at least 15 wt.% propellant (which is a VOC) in the aerosol but is completely silent about any maximum amount. The problem addressed by the application of releasing less VOCs into the environment is solved only when the propellant does not exceed a particular maximum amount in the aerosol composition – this maximum value is therefore an essential feature of the invention. Claim 1 covers aerosols comprising any amount of propellant greater than or equal to 15 wt.%, thereby covering the deficient high percentage of propellant present in conventional aerosols. The percentage of undesirable VOCs in the claimed aerosol compositions is therefore not "dramatically decreased", and so the stated aim of this invention is not achieved.

### Example 6

In the description, the problem addressed by the invention involves providing a winter tyre with an improved grip. The grip is improved by printing an R-shaped profile on the tyre and using a rubber mixture that includes 55% of the substance XYZ.

Claim: a winter tyre made of a rubber mixture that includes 55% of the substance XYZ.

The claim does not contain all the essential features of the invention as the description discloses that the problem of improving the tyre's grip is solved by using both a special R-shaped profile and a special rubber mixture.

### **Example 7 (no solution provided)**

According to the description, the test results show that if chlorine dioxide is present in an amount less than 0.1 wt.%, no reduction of odours emanating from animal discharges can be obtained.

Claim: a composition to be added to animal feed in order to reduce odours emanating from animal discharges comprising:

- a. water with a calcium carbonate content less than 1 000 ppm;
- b. chlorine dioxide in an amount less than 0.5 wt.%;
- c. a base in an amount sufficient to adjust the pH of the composition to a value greater than 7.

### **Example 8**

In the description, the problem to be solved is to record in an automated manner the same television programme on two DVD recorders remote from each other by transmitting the programme information of the first DVD recorder to the second DVD recorder via a communication path.

Claim: a method of recording the same television programme on two DVD recorders, wherein the second DVD recorder is in a location remote from the first DVD recorder, the co-ordinated method comprising:

- interconnecting a first DVD recorder and a second DVD recorder by a communication path
- selecting a programme for recording on the first DVD recorder
- recording the selected programme on the first DVD recorder
- recording the selected programme on the second DVD recorder

The problem to be solved is to record in an automated manner the same television programme on two DVD recorders remote from each other by transmitting the programme information of the first DVD recorder to the second DVD recorder via the communication path. The mere presence of a connection between the two DVD recorders does not imply any transmission of the data between them.

Therefore, the automated transmission of the programme information via the communication path is not implicit from the claim.

If support is provided in the description, the claim should be amended to include the additional step of:

"- transmitting the programme information of the first DVD recorder to the second DVD recorder via the communication path"

#### Example 9

Claim: a powder coating comprising a binding agent, a curing agent and an additive, characterised in that the additive is a tertiary amine which does not decrease the gel time of the coating by more than 5/6 times compared with the gel time of the additive-free coating.

The description is silent about the method for determining the gel time and discloses only a few examples of tertiary amines.

For want of any technical guidance in the description, the functional definition of the additive merely invites a skilled person to perform a research programme. The claim is unclear as it lacks essential features. It is not specified which amines fall within the scope of the invention.

### Example 10

Claim 1: "A device for processing samples, the device comprising a plurality of microstructures, each of said microstructures comprising:

a supply reservoir;

a drain reservoir connected to the supply reservoir by one or more channels;

an elution buffer reservoir; a waste reservoir; and a separation channel connecting the elution buffer reservoir and the waste reservoir."

Claim 2: "A method for processing samples, the method comprising the steps of:

providing a device comprising a plurality of microstructures;

introducing a sample into each of said microstructures;

conducting an assay on the sample in each of said microstructures."

The application concerns a device and a method, i.e. claims in different categories.

However, the device described in method claim 2 is not the same as that described in device claim 1. It is not possible to establish from the two sets of independent claims which technical features are essential to the invention.

The claims should be redrafted so that the device described in method claim 2 is the same as the device described in independent device claim 1. This could be overcome by, for example, including an explicit reference to the device of claim 1 in method claim 2.

#### Legal references:

R. 43(3) EPC, GL F-IV, 4.5.1, GL F-IV, 4.5.2, GL F-IV, 4.5.3

### 6. Negative limitations, e.g. disclaimers

A claim's subject-matter is normally defined in terms of positive features indicating that certain technical elements are present.

Exceptionally, however, the subject-matter may be restricted using a negative limitation expressly stating that particular features are absent.

Negative limitations such as disclaimers may be used only if adding positive features to the claim either would not define more clearly and concisely the subject-matter still protectable or would unduly limit the scope of the claim.

It has to be clear what is excluded by means of the disclaimer.

A claim containing one or more disclaimers must also fully comply with the clarity and conciseness requirements of <u>Article 84 EPC</u>.

Moreover, in the interests of the patent's transparency, the excluded prior art needs to be indicated in the description in accordance with <u>Rule 42(1)(b) EPC</u>, and the link between the prior art and the disclaimer needs to be shown.

### **Examples**

A claim defining a negative limitation: "A compound comprising [...] and a metal, wherein the metal is not aluminium."

If the exclusion of aluminium is introduced during prosecution, e.g. during examination, the negative limitation is a disclaimer.

### Legal references:

R. 42(1)(b) EPC, GL F-IV, 4.19

### 7. Reference in a claim to another claim

A claim containing a reference to another claim is not necessarily a dependent claim as defined in Rule 43(4) EPC.

One example of this is a claim referring to a claim of a different category (e.g. "Apparatus for carrying out the process of claim 1 ...", or "Process for the manufacture of the product of claim 1 ...").

Similarly, in a plug and socket arrangement, a claim to one part referring to the other co-operating part (e.g. "plug for co-operation with the socket of claim 1 ...") is not a dependent claim.

In all these examples, the extent to which the claim containing the reference necessarily involves the features of the claim referred to has to be carefully considered. Objections on the grounds of lack of clarity and failure to state the technical features (see <a href="Rule 43(1">Rule 43(1)</a> EPC) apply to a claim which simply says "Apparatus for carrying out the process of claim 1". Since the change of category already makes the claim independent, the applicant is required to set out clearly in the claim the essential features of the apparatus.

The same is true for a claim which says "Method for using an apparatus according to claim 1". The method claim, formulated as a use claim, lacks the steps that are carried out in order to use the apparatus and is therefore not clear.

The subject-matter of a claim in one category may also to some extent be defined in terms of features from another category. Therefore, an apparatus may be defined in terms of functions it is able to perform, provided that the structure is made sufficiently clear, or a process may be defined in terms of essential structural features of the apparatus for carrying it out, or an element of an apparatus may be defined in terms of how it is made. However, in the wording of these claims and in the assessment of the claimed subject-matter, a clear distinction must be maintained between product claims (for a device, apparatus or system) and process claims (for a process, activity or use). For example, a claim for an apparatus cannot normally be limited only by the manner in which the

apparatus is used; for this reason, a claim which simply reads "Apparatus Z, when used for carrying out process Y" is also objected to on the grounds of lack of clarity and failure to state the technical features (see <u>Rule 43(1) EPC</u>).

### **Examples**

### **Example 1**

Claim 1: "A winter tyre characterised by an R-shaped profile and a rubber mixture that contains 55% XYZ."

Claim 2: "A rubber mixture according to claim 1 that further contains 10% of the additive ABC."

Despite the reference to claim 1, claim 2 is an independent claim as it does not include all the features of claim 1 (the features relating to the winter tyre and its R-shaped profile are missing).

### Example 2

Claim 1: "A winter tyre characterised by an R-shaped profile and a rubber mixture that contains 55% XYZ."

Claim 2: "A winter tyre as claimed in claim 1 in which the R-shaped profile is replaced by a W-shaped profile."

Despite the reference to claim 1, claim 2 is an independent claim as it does not include all the features of claim 1 (the feature relating to the R-shaped profile of the tyre is missing), so claim 2 in fact specifies a different tyre from that of claim 1.

### Legal references:

R. 43(1) EPC, GL F-IV, 3.8

### 8. No meaningful search possible

An invitation under <u>Rule 63(1) EPC</u> and subsequent limitation of the search under <u>Rule 63(2) EPC</u> may result from the application not meeting the relevant requirements of the EPC to such an extent that a meaningful search of the claims, or of some of the claims, or of part of a claim, is impossible. This kind of application is sometimes called a "complex application". In these cases, the applicant is invited to file, within a period of two months, a statement indicating the subject-matter to be searched.

<u>Rule 63 EPC</u> relates only to the practicability of the search and not to the potential relevance of its results on subsequent examination. Even if a search were not to produce any result that could be used in examination proceedings, a search cannot be refused by reference to <u>Rule 63 EPC</u>.

What is or is not "meaningful" is a question of fact for the search division to determine. Its finding may change in the light of any reply from the applicant to the invitation under Rule 63(1) EPC. The exercise of the search division's discretion will depend upon the facts of the case. A restriction of the search must be carefully considered. There are cases where a search is rendered *de facto* impossible by the failure to meet the prescribed requirements of the EPC, for example a fundamental lack of clarity. The word "meaningful" must be construed reasonably. It is not to be construed in such

a way that <u>Rule 63 EPC</u> is invoked simply because a search is difficult or does not provide results that are significant for subsequent examination proceedings.

As there is no legal provision providing that an applicant must formulate the application in such a way as to make an economical search possible, "reasons of economy" cannot be used as a reason, or part of a reason, for issuing an incomplete search report.

The basic principle is that there needs to be clarity and openness for both the applicant and third parties as to what has and what has not been searched.

### **Examples**

Example (i): claims lacking clarity

An example would be where the applicant's choice of parameter to define the invention renders a meaningful comparison with the prior art impossible, perhaps because the prior art has not used the same parameter, or has used no parameter at all. In that case, the parameter chosen by the applicant may lack clarity. It may be that the lack of clarity of the parameter is such as to render a meaningful search of the claims or of a claim or of a part of a claim impossible because the choice of parameter renders a sensible comparison of the claimed invention with the prior art impossible. If so, the application of <u>Rule 63 EPC</u> and the issuing of a subsequent incomplete search report (or, in exceptional cases, no search at all) under <u>Rule 63(2) EPC</u> may be appropriate, the search possibly being restricted to the worked examples, as far as they can be understood, or to the way in which the desired parameter is obtained. Any response from the applicant to the invitation under <u>Rule 63(1) EPC</u> is taken into account in determining the subject-matter to be searched.

Example (ii): claims lacking support; insufficient disclosure

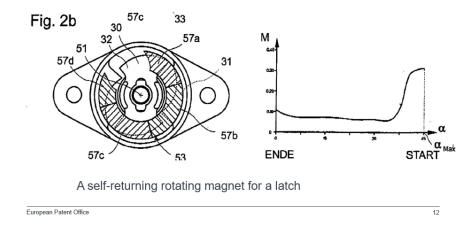
One example would be a claim so broadly formulated that its scope is at least to a certain extent speculative, i.e. not supported by the disclosure of the application. In this case, the broadness of the claim is such as to render a meaningful search over the whole of the claim impossible, and a meaningful search can only be performed on the basis of the narrower, disclosed invention. In extreme cases, this may mean a search directed only to (one or more of) the specific examples disclosed in the description. Here, the requirements underlying the application of <u>Rule 63 EPC</u> would be those of sufficiency of disclosure and support set out in <u>Articles 83</u> and <u>84 EPC</u>.

Example (iii): claims lacking conciseness

An example would be where there are so many claims, or so many possibilities within a claim, that it becomes unduly burdensome to determine the matter for which protection is sought. A complete search (or any search at all) may *de facto* be impossible. The application of <u>Rule 63 EPC</u> and the issuing of a subsequent incomplete search report or a declaration of no search may be appropriate, on the grounds that the lack of conciseness of the claim(s) is such as to render a meaningful search impossible.

An example based on a real case: a self-returning rotating magnet for a latch

### **Complex applications - Example**



### Claims:

"8. A rotating magnet according to one of the preceding claims, wherein a surface of the different magnetic poles (59) of the rotor disc (52) is of the same size **or** of a different size **and/or** the rotor disc (52) carries a ring (53) of permanent magnetic poles (57a-57d) facing a coil (4), **in particular** wherein the magnetic poles (57a-57d) are of the same size **or** of a different size.

..."

(Dependent claims 2-5, 10 and 13 also contain a large number of "and/or" formulations.)

The search examiner sends out a clarification request under Rule 63 EPC stating:

"Dependent claims 2-5, 7, 8, 10 and 13 contain a large number of alternative features (and/or). Therefore, it is particularly burdensome for a skilled person to establish the subject-matter for which protection is sought. Non-compliance with the substantive provisions is such that a meaningful search of the whole claimed subject-matter cannot be carried out (Rule 63 EPC and Guidelines B-VIII, 3).

The applicant is therefore invited to file a statement indicating the subject-matter to be searched within the time limit indicated in the present communication (Rule 63(1) EPC)."

### The applicant replies:

"In response to the communication pursuant to <u>Rule 63 EPC</u>, we hereby state that claim 8 has to be understood in the following way:

"8. A rotating magnet according to one of the preceding claims, wherein a surface (59) of the different magnetic poles (59) of the rotor disc (52) is of the same size **and/or** the rotor disc (52) carries a ring (53) of permanent magnetic poles (57) facing a coil (4), **in particular** wherein the magnetic poles (57) are of the same size **or** of a different size."

#### A European search opinion is issued:

"In reply to the invitation to file a statement indicating the subject-matter to be searched, the applicant indicated how to clarify claims 2-5, 7, 8 and 10.

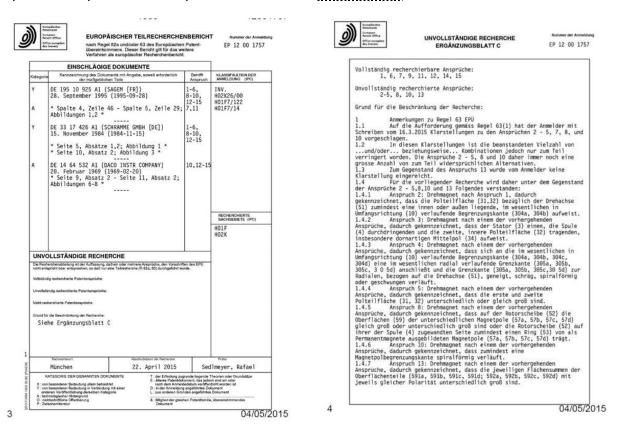
However, in those clarifications just some of the alternatives (and/or) have been reduced. Therefore, claims 2-5, 7, 8 and 10 still contain a large number of alternatives, some of them even being contradictory.

Pursuant to <u>Rule 63(2) EPC</u>, the extent of the search was consequently limited to the examples clearly defined in, and supported and disclosed by, the description and Fig. 2b, that is

9. A rotating magnet according to one of the preceding claims, wherein a surface (59) of the different magnetic poles (59) of the rotor disc (52) is of the same size **and** the rotor disc (52) carries a ring (53) of permanent magnetic poles (57) facing a coil (4).

The applicant's attention is drawn to the fact that the application will be further prosecuted on the basis of subject-matter for which a search has been carried out and that the **claims should be limited to that subject-matter at a later stage of the proceedings (Rule 63(3) EPC)**."

A partial European search report is issued under Rule 63 EPC:



### Legal references:

R. 63 EPC, GL B-VIII, 3

### 9. Interpreting claims

Each claim must be read giving the words the meaning and scope which they normally have in the relevant art, unless in particular cases the description gives the words a special meaning, by explicit definition or otherwise. Moreover, if any such special meaning applies, the applicant should, so far as possible, amend the claim so that the meaning is clear from the wording of the claim alone.

This is important because it is only the claims of the European patent, not the description, which will be published in all the official languages of the EPO.

The claim must also be read with an attempt to make technical sense out of it. Doing so may involve departing from the strict literal meaning of the wording of the claims.

However, <u>Article 69 EPC</u> and its Protocol do not provide a basis for excluding what is literally covered by the terms of the claims.

A granted European patent confers on its proprietor, in each contracting state in respect of which it is granted, the same rights as would be conferred by a national patent granted in that state (see <a href="Article 64 EPC">Article 64 EPC</a>). The extent of that protection is determined by the claims, as interpreted using the description and drawings (<a href="Article 69 EPC">Article 69 EPC</a>) and taking into account the Protocol on the Interpretation of <a href="Article 69 EPC">Article 69 EPC</a>.

Interpreting the extent of protection of a patent is the task not of the EPO but of the competent national courts, e.g. in infringement cases. Hence, <u>Article 69 EPC</u> cannot be used to justify any exception to the requirements of <u>Article 84 EPC</u>. In fact, <u>Articles 84</u> and <u>69 EPC</u> complement each other.

This is clear from Article 1 of the Protocol on the Interpretation of <u>Article 69 EPC</u>, which states that the claims do not serve only as a guideline and that the actual protection conferred may not be extended to what, from a consideration of the description and drawings, the patent proprietor has contemplated. For example, <u>Article 69 EPC</u> cannot be invoked to avoid deleting embodiments no longer covered by the claims.

### Legal references:

Art. 69 EPC and its protocol, GL F-IV, 4.2

### 10. "Comprising" vs "consisting of"

A claim directed to an apparatus/method/product "comprising" certain features is interpreted as meaning that it includes those features, but that it does not exclude the presence of other features, as long as they do not render the claim unworkable.

On the other hand, if the wording "consist of" is used, then no further features are present in the apparatus/method/product apart from the ones following said wording.

In particular, if a claim for a chemical compound refers to it as "consisting of components A, B and C" by their proportions expressed in percentages, the presence of any additional component is excluded and therefore the percentages must add up to 100%.

In the case of chemical compounds or compositions, the use of "consisting essentially of" or "comprising substantially" means that specific further components can be present, namely those not materially affecting the essential characteristics of the compound or composition. For any other apparatus/method/product these terms have the same meaning as "comprising".

### **Examples**

Claim 1: "An optical fibre core glass containing 1 wt.% arsenic trioxide, wherein the glass consists of:

- 15-25 mol.% soda,
- 5-20 mol.% boric oxide and
- 25-65 mol.% silica."

The percentages should total 100 mol.%. This is not the case here, so the claim is not clear.

### Legal references:

GL F-IV, 4.20

### 11. Optional features

Optional features, i.e. features preceded by expressions such as "preferably", "for example", "such as" or "more particularly" are allowed if they do not introduce ambiguity. In that case, they are to be regarded as entirely optional, i.e. they don't have a limiting effect on the scope of the claim.

These expressions introduce ambiguity and render the scope of the claim unclear if they do not lead to a restriction of the subject-matter of the claim.

### **Examples**

A claim defining "a method to manufacture an artificial stone, such as a clay brick" is not clear because a clay brick will never be an artificial stone. Hence, it is unclear if either an artificial stone or a clay brick is manufactured by the method of the claim.

A claim specifying that "the solution is heated up to between 65 and 85°C, particularly to 90°C" is not clear because the temperature after the term "particularly" contradicts the range before it.

A claim defining a "Device, in particular a seat, the seat comprising ..." is not clear because it is not clear whether the claim defines a device (in general) or a seat.

### Legal references:

GL F-IV, 4.9

### 12. Reference signs and text in parentheses

If the application contains drawings, and the comprehension of the claims is improved by establishing the connection between the features mentioned in the claims and the corresponding reference signs in the drawings, then appropriate reference signs need to be placed in parentheses after the features mentioned in the claims. If there are a large number of different embodiments, only the reference signs of the most important embodiments need be incorporated in the independent claim(s). Where claims are drafted in the two-part form set out in <u>Rule 43(1) EPC</u>, the reference signs need to be inserted not only in the characterising part but also in the preamble of the claims.

Reference signs are not, however, to be construed as limiting the extent of the matter protected by the claims; their sole function is to make claims easier to understand. A comment to that effect in the description is acceptable.

If text is added to reference signs in parentheses in the claims, lack of clarity can arise. Expressions such as "securing means (screw 13, nail 14)" or "valve assembly (valve seat 23, valve element 27, valve seat 28)" are not reference signs within the meaning of Rule 43(7) EPC but are special features, to which the last sentence of Rule 43(7) EPC is not applicable. Consequently, it is unclear whether the features added to the reference signs are limiting or not. Accordingly, such bracketed features are generally not permissible. However, additional references to those figures where particular reference signs are to be found, such as "(13 – Figure 3; 14 – Figure 4)" are unobjectionable.

A lack of clarity can also arise with bracketed expressions that do not include reference signs, e.g. the expression "(concrete) moulded brick" is unclear because it cannot be determined if the feature moulded brick is limited or not by the word concrete. In contrast, bracketed expressions with a generally accepted meaning are allowable, e.g. "(meth)acrylate", which is known as an abbreviation for "acrylate and methacrylate". The use of brackets in chemical or mathematical formulae is also unobjectionable.

### **Examples**

A claim defining "An amplifier (7) ... " is clear if "7" is a reference numeral for an amplifier in a figure.

Text in brackets, e.g. "A (mobile) phone ...", renders a claim unclear.

### Legal references:

GL F-IV, 4.18

### 13. Claims not supported by the description

Claims that are too broad with respect to the description may lack essential features. They may contravene Article 84 EPC for not being supported by the description.

Most claims are generalisations from one or more particular examples. The extent of generalisation permissible is a matter which the division must judge in each particular case in the light of the relevant prior art. Thus, an invention which opens up a whole new field is entitled to more generality in the claims than one which is concerned with advances in a known technology. A fair statement of claim is one which is not so broad that it goes beyond the invention nor yet so narrow as to deprive applicants of a just reward for the disclosure of their invention. Applicants are allowed to cover all obvious modifications of, equivalents to and uses of that which they have described. In particular, if it is reasonable to predict that all the variants covered by the claims have the properties or uses the applicants ascribe to them in the description, they are allowed to draw the claims accordingly.

As a general rule, a claim is regarded as supported by the description unless there are well-founded reasons for believing that the skilled person would be unable, on the basis of the information given in the application as filed, to extend the particular teaching of the description to the whole of the field claimed by using routine methods of experimentation or analysis. Support must, however, be of a technical character; vague statements or assertions having no technical content provide no basis.

An objection of lack of support is raised only if there are well-founded reasons for doing so. Once a reasoned case has been set out that, for example, a broad claim is not supported over the whole of its breadth, the onus of demonstrating that the claim is fully supported lies with the applicant. Where an objection is raised, the reasons are, where possible, to be supported specifically by a published document.

A claim in generic form, i.e. relating to a whole class, e.g. of materials or machines, may be acceptable even if of broad scope, if there is fair support in the description and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed. Where the information given appears insufficient to enable a person skilled in the art to extend the teaching of the description to parts of the field claimed but not explicitly described by using routine methods of experimentation or analysis, a reasoned objection is raised and the applicant is invited to establish, by suitable response, that the invention can in fact be readily applied on the basis of the information given over the whole field claimed or, failing this, to restrict the claim accordingly.

Where certain subject-matter is clearly disclosed in a claim of the application as filed but is not mentioned anywhere in the description, it is permissible to amend the description so that it includes this subject-matter. Where the claim is dependent, it may suffice if it is mentioned in the description that the claim sets out a particular embodiment of the invention.

### **Examples**

### Example 1

A claim relates to a process for treating all kinds of "plant seedlings" by subjecting them to a controlled cold shock so as to produce specified results, whereas the description discloses the process applied to one kind of plant only. Since it is well known that plants vary widely in their properties, there are well-founded reasons for believing that the process is not applicable to all plant seedlings. Unless the applicants can provide convincing evidence that the process is nevertheless generally applicable, they must restrict their claim to the particular kind of plant referred to in the description. A mere assertion that the process is applicable to all plant seedlings is not sufficient.

### **Example 2**

A claim relates to a specified method of treating "synthetic resin mouldings" to obtain certain changes in physical characteristics. All the examples described relate to thermoplastic resins and the method is such as to appear inappropriate to thermosetting resins. Unless the applicants can provide evidence that the method is nevertheless applicable to thermosetting resins, they must restrict their claim to thermoplastic resins.

### Example 3

A claim relates to improved fuel oil compositions which have a given desired property. The description provides support for one way of obtaining fuel oils having this property, which is by the presence of defined amounts of a certain additive. No other ways of obtaining fuel oils having the desired property are disclosed. The claim makes no mention of the additive. The claim is not supported over the whole of its breadth, resulting in an objection.

#### **Example 4**

"The use of a family of compound X represented by the general formula X as insecticides."

The description only discloses using one compound of formula X1, which belongs to the family of compounds X, as an insecticide. There is no proof that all the other compounds X of the family can be used as insecticides.

X1 is the subject of the search and the applicant is requested to limit the claim to the use of X1 as an insecticide. The generalisation to the whole family of compounds can be objected to under <u>Articles 83</u> and <u>Article 84 EPC</u>. In addition, an objection for lack of inventive step can be raised under <u>Article 56 EPC</u> as the subject-matter of the claim does not solve the problem addressed by the invention (only X1 has been disclosed as solving the problem).

### Legal references:

Art. 84 EPC, GL F-IV, 4.22, GL F-IV, 6.1, GL F-IV, 6.2, GL F-IV, 6.3, GL F-IV, 6.4

European Patent Academy European Patent Office Munich Germany © EPO 2024

Responsible for the content European Patent Academy academy@epo.org