

Requirements for Claims

Japan Patent Office

---(Slide 0)---

Welcome to the lecture on “Requirements of Claims.”

- I. Clarity Requirement
- II. Support Requirement

---(Slide 1)---

Requirements related to claims include the clarity requirement, support requirement, conciseness requirement, formal requirement, and other requirements. In this lecture, I will explain the clarity requirement and the support requirement.

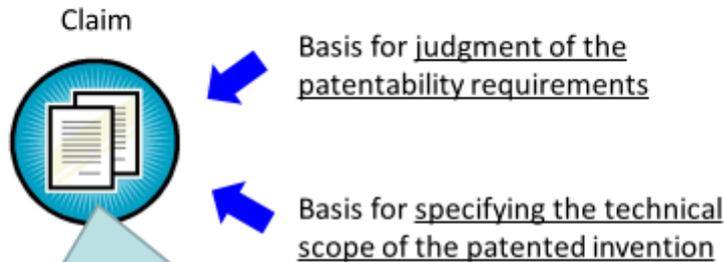
- I. **Clarity Requirement**
- II. Support Requirement

---(Slide 2)---

First, let's look at the clarity requirement.

I. Clarity Requirement

A. Basic Rule



An invention must be **clearly identified** from one claim.

	JPO	EPO	USPTO	SIPO	KIPO	PCT
Clarity Requirement	Art. 36(6)(ii)	Art. 84	Art. 112(b)	Art. 26	Art. 42(4)2	Art. 6

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I will explain why the clarity requirement is necessary.

Claims have two important roles. First, claims serve as the basis for judging patentability requirements.

Examiners identify an invention for which a patent is sought based on the statement in the claim; and they then judge whether the claim fulfills the patentability requirements, such as novelty and inventive step.

Second, claims serve as the basis for determining the technical scope of the patented inventions after the claims are patented.

The necessity of the clarity requirement follows these two roles of patent claims.

If an invention cannot be understood clearly based on the statement of the claim, examiners cannot judge whether the invention fulfills the patentability requirements, and people cannot determine the technical scope of the patented invention.

Therefore, an invention must be clearly identifiable from a claim by a person skilled in the art.

This is why the clarity requirement is necessary.

I. Clarity Requirement

B. Examples of Lack of Clarity Requirement

1. The statement of the claim itself is unclear.

- (1) Inadequate expression in language rendering a claimed invention unclear

- Mistake in writing
- Grammatical error



- (2) Incomprehensible term

[Claim]

A process for manufacturing compound X, consisting of process A and process B in the presence of KM-II catalyst.

- Not defined in the description
- Incomprehensible even by taking into account the common general knowledge as of the filing date

➔ The claim is **not clear**.

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As I explained using the previous slide, claims shall be clear.

Therefore, if an examiner finds that the claim of a patent application is unclear, the examiner will notify the applicant.

Then, in which cases should the examiner judge that the claim lacks clarity?

In this lecture, I will show seven types of violations against clarity requirements.

However, please note the following. First, even if a case does not correspond to any one of the seven types, this does not immediately mean that the claim is clear.

Second, even if a case seems to correspond formally to one of the seven types, there are cases where the statement of the claim can be clearly understood based on the description or drawings or based on the common general knowledge of a person skilled in the art.

Therefore, examiners need to read through not only the claims but also the description and drawings and they need to be familiar with the common general knowledge in the technical field.

Now, let's look at a first type of violation against the clarity requirement.

This is a type of case where the statement of the claim itself is unclear.

First, if a claim includes linguistically inappropriate expressions, the claim can be unclear.

This includes clerical and grammatical errors.

Second, expressions that a person skilled in the art cannot understand will make the claim unclear.

Please look at example (2) on this slide.

“A process for manufacturing compound X, consisting of Process A and Process B in the presence of KM-II catalyst.”

The term “KM-II catalyst” as used here is not defined in the description.

Moreover, a person skilled in the art cannot understand the meaning of the term “KM-II catalyst” even in consideration of the common general knowledge as of the filing date.

In this case, because the meaning of the term “KM-II catalyst” is unclear, the claim is also unclear.

I. Clarity Requirement

B. Examples of Lack of Clarity Requirement

2. A technical defect exists in the matters used to specify the invention.

[Claim]
An alloy comprising;
50 to 60wt% Fe,
40 to 50wt% Cu, and
20 to 30wt% Ni.



The claim includes a technical deficiency.
(50+40+20=110%) ← **Over 100%!**
→ The claim is **not clear.**

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Now, let's look at a second type of violation.

This is a type of case where there are technical defects in the matters used to specify the invention.

Please look at the example on the slide.

An alloy comprising

50 to 60 weight percent iron;

40 to 50 weight percent copper; and

20 to 30 weight percent nickel.

This claim includes three conditions related to the ingredients.

Please note the minimum percentages needed to fulfill each condition.

In order to fulfill the first condition, at least 50% of the alloy must be iron.

In order to fulfill the second condition, at least 40% of the alloy must be copper.

In other words, at least 90% of the alloy is iron and copper, so the room left for nickel is at most 10%.

However, in order to fulfill the third condition, at least 20% of the alloy must be nickel.

Therefore, if an alloy fulfills both the first and second conditions, the alloy cannot fulfill the third condition.

In short, no alloy meets all three conditions specified in the claim.

This type of claim is technically defective and therefore unclear.

I. Clarity Requirement

B. Examples of Lack of Clarity Requirement

3. The category of an invention is unclear. (See also Chapter IV C.)

There are two basic kinds of claims (categories of claims).

a. **Physical entity** (Product, Apparatus, System, ...)

b. **Activity** (Method, Process, Use, ...)

[Claim]

A product and method comprising

[Claim]

An anti-cancer effect of chemical compound A.

Product Claim? Method Claim?

➔ The claims are **not clear**.



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Let's look at a third type.

This type of violation occurs when the category of invention is unclear.

Inventions must fall into either of two categories. The first category is physical entities, such as products, devices, and systems.

The second category is activities, such as methods, processes, and use.

Now, please remember the second role of patent claims.

The claim serves as the basis for determining the technical scope of the patented invention.

The technical scope of the patented invention differs by the category of invention.

Therefore, if the category of invention cannot be determined based on the statements of the claim, the technical scope of the patented invention cannot be determined.

As shown in this example, if the category of invention is unclear, the claim is also unclear.

I. Clarity Requirement

B. Examples of Lack of Clarity Requirement

4. The scope of the invention is unclear as a result of using the following expressions.

“thin” “wide” “strong”
“about” “approximately”
“when desired” “for example”

- Vague or equivocal forms of wording may leave the reader in doubt as to the scope of the invention.
- In that case, the claim is **not clear**.

“high-frequency” in the technical field of amplifier

Clear for a person skilled in the art!

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Let's look at a fourth type of violation.

The expressions shown in the text box of this slide may make claims unclear.

If adjectives such as “thin,” “wide,” and “strong,” are used in the claim without specifying the exact measurements, the claim may become unclear.

In addition, expressions that make the range of numbers vague, such as “about,” or “approximately,” may also make the claim unclear.

You also have to pay attention to expressions like “when desired,” or “for example.”

If the scope of the invention becomes unclear to a person skilled in the art as a result of using these expressions, the claim is unclear.

However, there is one thing that I would like you to be careful about.

If you use a term that has a meaning that is widely recognized in the technical field in order to express the said meaning, we cannot say that the use of the term makes the claim unclear.

For example, the meaning of the term “high-frequency” in the technical field of amplifiers is clear to a person skilled in the art.

I. Clarity Requirement



B. Examples of Lack of Clarity Requirement

5. Definition by function or characteristics, etc.

When the claim includes the definition by function, characteristics, etc., there are cases where the claim becomes unclear.

(Example 1)

[Claim]

Compounds **having the R receptor activating action.**



- The description states that the applicant was the first to discover the "R receptor."
- It is common general knowledge as of the filing date that **it is difficult to understand the specific compounds defined only by their action** of activating the newly discovered receptor.

➡ The claim is **not clear.**

It is noted that, in general, claims may be expressed by function or characteristics, etc.

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Let's now look at a fifth type of violation.

If a claim includes definitions by functions or characteristics, rather than by structures, the claim can become unclear in some cases.

Let's look at the claim in Example 1.

"Compounds having the R receptor activating action."

The description of this patent application states that the applicant was the first to discover the "R receptor."

It is common general knowledge as of the filing date that it is difficult to understand the specific compounds defined only by their action of activating the newly discovered receptor.

In this case, the chemical composition or chemical structure of the compounds cannot be understood based solely on the action of "activating the R receptor."

Therefore, this claim is unclear.

I. Clarity Requirement

B. Examples of Lack of Clarity Requirement

5. Definition by function or characteristics, etc.

(Example 2)



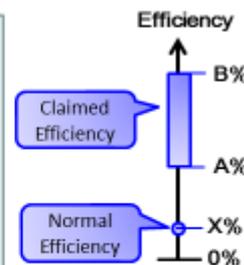
[Claim]

A hybrid car of which energy efficiency during running on electricity is from A to B%.

- In the field of the hybrid car, it is common general knowledge as of the filing date that the energy efficiency is normally about X%, far lower than A%.
- In light of this, **it is difficult to understand the specific hybrid car defined only by such high energy efficiency.**

➔ The claim is **not clear.**

It is noted that, in general, claims may be expressed by function or characteristics, etc.



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Let's look at Example 2 of the fifth type of violation.

“A hybrid car for which the energy efficiency while running on electricity is between A% to B%.”

In the field of hybrid cars, it is common general knowledge as of the filing date that energy efficiency is normally about X%, which is far lower than A%.

Therefore, it is difficult for a person skilled in the art to understand the specific hybrid car defined only by such high energy efficiency.

As a result, this claim is unclear.

I. Clarity Requirement



B. Examples of Lack of Clarity Requirement

6. Product by Process Claims - 1/2

- Product by process (PBP) claim = a claim defining a product in terms of the process by which the product is made.
- Normally, a PBP claim shall be construed to refer to the final product *per se*.

[Example]

A compound A sodium salt prepared by a process comprising the steps of:

- a) forming an enriched organic solution of the compound A;
- b) precipitating a compound A as its ammonium salt;
- c) purifying the ammonium salt by recrystallization;
- d) transposing the ammonium salt to sodium salt; and
- e) isolating a compound A sodium salt.

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The sixth type of violation is the case where a “product by process claim” becomes unclear.

A “product by process claim” is a claim defining a product in terms of the process by which the product is made.

This is called a “PBP claim” for short. Normally, a PBP claim shall be construed to refer to the final product *per se*.

Please look at the example in this slide.

This is an example of a claim for compound A sodium salt prepared by a process comprising steps a through e.

The scope of this claim covers not only compound A sodium salt prepared by the process comprising steps a through e, but also a substance with the same ingredients prepared by a different process.

Therefore, the scope of a PBP claim is difficult to understand at a glance.

In which case does the PBP claim become unclear?

Let's go to the next slide.

B. Examples of Lack of Clarity Requirement

6. Product by Process Claims - 2/2

When a claim concerning an invention of a product recites a manufacturing method for the product, **the invention is clear only when the invention involves the situation where it is impossible or utterly impractical to define the product by its structure or characteristics at the time of filing.** Otherwise the invention of the product is judged to be not clear.

Examples of the above situations:

- (i) It is technically impossible to analyze its structure or characteristics at the time of filing.
- (ii) It requires an outrageously large economic expenditure or time to carry out the work necessary to identify the structure or property of the product in view of the nature of a patent application which requires speed, etc.

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In JPO practice, when a claim concerning an invention of a product recites a manufacturing method for the product, the invention is clear only when the invention involves a situation where it is impossible or utterly impractical to define the product by its structure or characteristics at the time of filing.

In other words, as explained in the previous slide, the scope of the PBP claim is difficult to understand at a glance and therefore the claim is unclear in principle.

However, in JPO practice, PBP claims are accepted in the following cases.

In cases where it is technically impossible to analyze the structure or characteristics of a product at the time of filing.

Or in cases requiring an outrageously large economic expenditure or time to carry out the work necessary to identify the structure or property of the product in view of the nature of a patent application, which requires speed, etc.

B. Examples of Lack of Clarity Requirement

7. Trademark, etc.

- Trademarks and similar expressions characterize the commercial origin of goods, rather than the properties of the goods relevant to the invention.
- **Even though a trademark itself is the same, the goods and those properties indicated by the trademark may be changed from time to time by decisions of the trademark holder.**



The examiner should encourage the applicant to **remove** trademarks and similar expressions in claims, unless their use is unavoidable.

Such words may be allowed, exceptionally, if they are generally recognized as having acquired a precise meaning.



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The seventh type of violation is the use of trademarks or similar expressions. Trademarks or similar expressions characterize the commercial origin of goods, rather than the properties of the goods relevant to the invention.

A trademark holder may change the ingredients or mechanical structure of goods to which the trademark is attached. So, the characteristics of the goods to which the same trademark is attached may change over time.

Therefore, if a trademark is used in the statement of the claim, the invention may become unclear.

Examiners should invite the applicant to remove trademarks and similar expressions in claims unless their use is unavoidable.

- I. Clarity Requirement
- II. **Support Requirement**

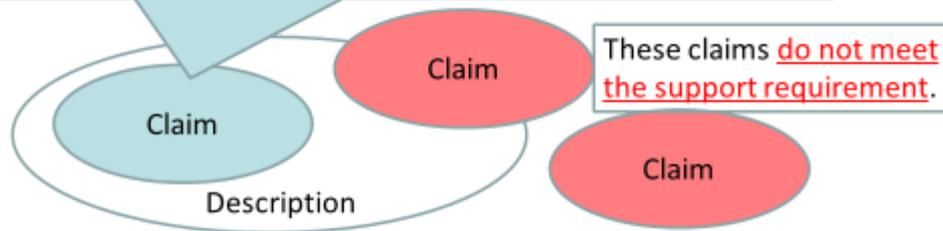
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Now, let's look at the support requirement.

II. Support Requirement

A. Basic Rule

The claimed inventions should **not exceed** the scope stated in the description.



To state in a claim an invention that is not stated in the description means to seek a patent protection for an invention which is not disclosed to the public.

	JPO	EPO	USPTO	SIPO	KIPO	PCT
Support Requirement	Art. 36(6)(i)	Art. 84	Art. 112(a) (Specification)	Art. 26	Art. 42(4)1	Art. 6

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What is the Support Requirement?

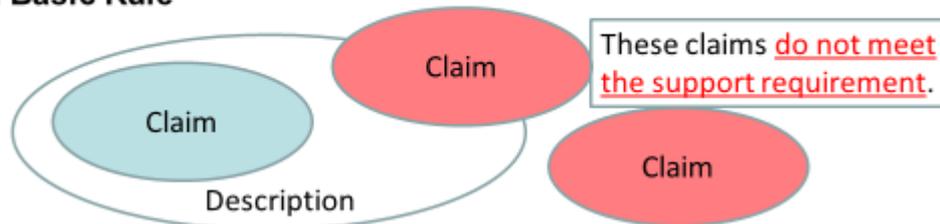
The basic principle of the patent system is to grant an exclusive right for a certain period for the invention that the applicant discloses to the public by means of the patent application.

Therefore, an applicant is not allowed to enjoy an exclusive right for a scope that is not disclosed in the description.

That is to say, a claimed invention should not exceed the scope stated in the description. In other words, a claim must be supported by the statement in the description. This is called the “support requirement.”

II. Support Requirement

A. Basic Rule



The examiner examines a substantial correspondence between the claimed invention and the invention stated in the description. The consideration of the substantial correspondence done by the examiner is to examine whether or not the claimed invention exceeds “the extent of disclosure in the description to which a person skilled in the art would recognize that a problem to be solved by the invention would be actually solved”.

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How, then, is the support requirement examined?

In JPO practice, examiners look for a substantial correspondence between the claimed invention and the invention stated in the description.

If there is a substantial correspondence, the claim is supported by the description.

In concrete terms, examiners examine whether the claimed invention exceeds “the extent of disclosure in the description to which a person skilled in the art would recognize that a problem to be solved by the invention would actually be solved.”

If the claimed invention exceeds this extent, the claim is not supported.

II. Support Requirement

B. Examples of Lack of Support Requirement

1. The matter neither stated nor implied in the description is stated in the claim.

[Description]

- The inventions using a **DC motor** are stated.
- The description **neither states nor implies** anything about using an **ultrasonic motor**.

[Claim]

..... using an **ultrasonic motor**.

➔ The claim is **not supported** by the description.

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If an examiner finds that a claim for a patent application does not fulfill the support requirement, the examiner notifies the applicant of that fact.

In which cases should examiners judge that the claim is not supported?

Let's look at four specific examples of violations against the Support Requirement.

The first is a case where a matter that is not stated or implied in the description is stated in the claim.

In the description, an invention using a DC motor is stated.

In the description, the use of an ultrasonic motor is not stated or implied.

On the other hand, the claim recites the use of an ultrasonic motor.

In this case, the claim is not supported by the description.

II. Support Requirement

B. Examples of Lack of Support Requirement

2. The relationship between the claim and the description is unclear.

[Description]

A word processor has means for changing the size of characters and means for changing line spacing.



Inconsistent

[Claim]

A word processor comprising data processing means, and

Relationship between the claim and description is unclear.

➡ The claim is **not supported** by the description.

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Let's look at the second example.

This is a case where the relationship between the claim and the description is unclear. The description states that a word processor has a “means for changing the size of characters” and a “means for changing line spacing.”

On the other hand, the claim states that the word processor has “a data processing means.”

In this case, it is unclear whether the “data processing means” in the claim corresponds to the “means for changing the size of characters” or “means for changing line spacing.”

Like the example explained in this slide, if the terms used in the description and the claim are inconsistent and the correspondence between the claim and description is unclear, it is judged that the claim is not supported by the description.

II. Support Requirement



B. Examples of Lack of Support Requirement

3. The content disclosed in the description can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing date.

◆ Hybrid Car 1/2

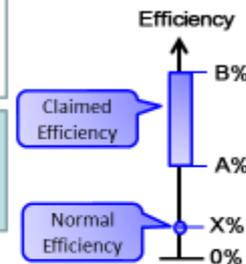
[Description]

The description only discloses hybrid cars equipped with a control means to perform “Y-control.”

[Claim]

A hybrid car of which energy efficiency during running on electricity is from A to B%.

➡ The claim is **not supported** by the description.



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Let's look at the third example.

This is a case where the details disclosed in the description cannot be expanded or generalized to the scope of the claimed invention.

The description only discloses a hybrid car equipped with a control means to perform Y-control.

In addition, as shown on the right hand side of the slide, the description shows that the energy efficiency of the hybrid car while running with electricity is within A% to B%.

On the other hand, the claim is “a hybrid car of which the energy efficiency during running on electricity is from A% to B%.”

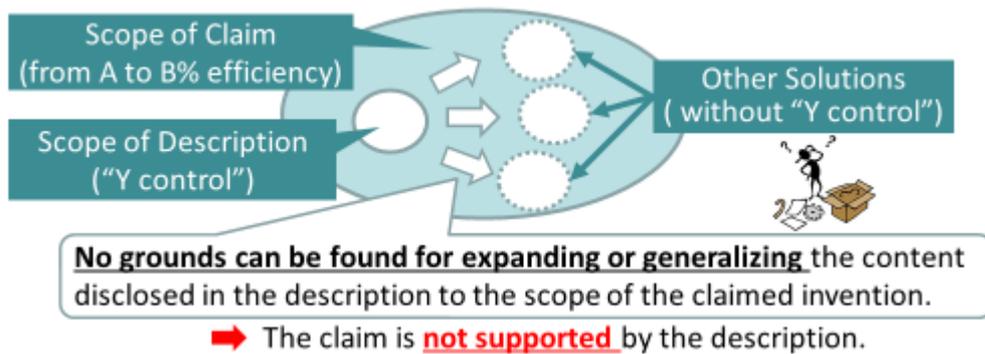
II. Support Requirement

B. Examples of Lack of Support Requirement

3. The content disclosed in the description can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing date.

◆ Hybrid Car 2/2

- It is difficult to realize a high energy efficiency such as from A to B% even in light of the common general knowledge as of the filing date.



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In the description, it is stated that the energy efficiency of A% to B% is realized by Y-control; however, it does not disclose the method of realizing the energy efficiency of A% to B% using a method other than Y-control.

On the other hand, the claim does not recite Y-control and therefore the claimed invention hence covers all hybrid cars that realize an energy efficiency of A% to B%, irrespective of a specific control method.

Meanwhile, it is difficult to realize this high energy efficiency, of A% to B%, according to common general knowledge as of the filing date.

Based on this fact, a person skilled in the art as of the time of filing would not be able to expand or generalize the details disclosed in the description to the scope of the claimed invention even in light of the common general knowledge.

In other words, there are no grounds for said expansion or generalization.

In this case, the claim is not supported by the description.

II. Support Requirement



B. Examples of Lack of Support Requirement

4. As a solution for the problem to be solved by the invention is not reflected in the claim, a patent is being claimed beyond the scope stated in the description.

[Description]

- The problem to be solved by the invention is how to prevent excessive automobile speed.
- Only a mechanism which **aggressively increases force** against stepping on the accelerator pedal as speed increases is disclosed.

[Claim]

A mechanism which **varies force** against stepping on the accelerator pedal as speed increases.

It is evident that **the problem cannot be solved** by the claimed invention.
➡ The claim is **not supported** by the description.

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Let's look at the fourth example.

This example is a case where the patent is claimed beyond the scope stated in the description because a solution for the problem to be solved by the invention is not reflected in the claim.

In this case, the claim is not supported by the description.

In this example, the description states that the problem to be solved by the invention is to prevent excessive automobile speed.

In the description, only a mechanism to increase force aggressively against stepping on the accelerator pedal as speed increases is disclosed as a means to solve the problem.

On the other hand, the claim recites "a mechanism which varies the force against stepping on the accelerator pedal as speed increases."

The mechanism specified in the claim includes not only the mechanism increasing the force against stepping on the accelerator pedal as speed increases but also the mechanism decreasing the force against stepping on the accelerator pedal as speed increases.

The latter mechanism cannot solve the problem of preventing excessive automobile speed.

In other words, a solution for the problem to be solved by the invention is not reflected in the claim and therefore the patent claim goes beyond the scope indicated in the description.

Therefore, the claim is not supported by the description.