

Requirements for Description

Japan Patent Office

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Welcome to the lecture on “Requirements of Description.”

- I. Enablement Requirement
- II. Other Requirements

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Here is the outline of this lecture.

- 1. Enablement Requirement
- 2. Other Requirements

I. Enablement Requirement

II. Other Requirements

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First, let's look at the enablement requirement.

I. Enablement Requirement



A. Basic Rule

The patent system promotes protection of inventions by granting an exclusive right under predefined conditions for a predefined period of time to those who have developed and disclosed new technology.

On the other hand, it gives the public an opportunity to gain access to the invention by disclosing technical details of the invention.

The utilization of an invention as described above are promoted through the description which serves as the technical document.



The description must meet the “Enablement requirement”
so as to serve as the technical document.



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The patent system is designed to protect inventions by granting an exclusive right (or patent right) to those persons who have developed and disclosed this new technology, for a specified period and under conditions determined in advance.

At the same time, the patent system gives others the opportunity to gain access to the invention by disclosing its technical details.

Such access is made possible by the description of the invention, which also serves as a technical document.

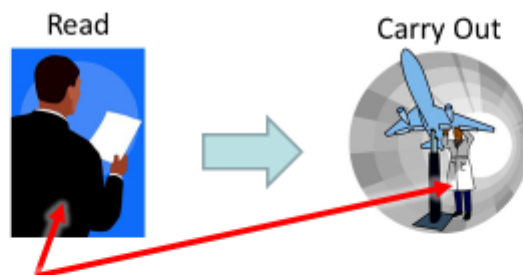
The description must therefore meet the “Enablement Requirement” so as to serve as a technical document.

Now let’s look at the “Enablement Requirement” in greater detail.

I. Enablement Requirement

PCT Article 5

The description shall disclose the invention in a manner sufficiently clear and complete for the invention **to be carried out by a person skilled in the art.**



A person skilled in the art: (PCT Guidelines 13.11)

A hypothetical person having ordinary skill in the art, who is aware of common general knowledge in the art at the relevant date, and has access to everything in the prior art.

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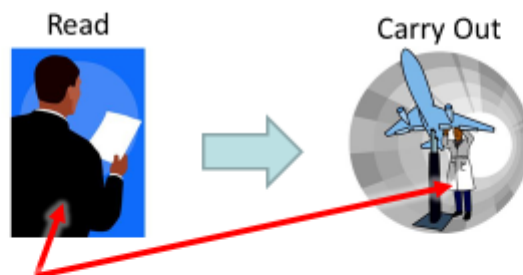
PCT article 5 stipulates “The description shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art.”

PCT Guideline 13.11 stipulates “The person skilled in the art should be presumed to be a hypothetical person having ordinary skill in the art and being aware of what was common general knowledge in the art at the relevant date.”

I. Enablement Requirement

Japanese Patent Act Article 36(4)

The statement in the description must be so clear and sufficient that **a person skilled in the art** can **carry out** the claimed invention.



A person skilled in the art: (JPO Examination Guidelines II.1.1.1.)

- i. being capable of using ordinary technical means for research and development; and
- ii. being capable of exercising ordinary creativity

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The Japanese Patent Act has substantially the same provision as the PCT.

The statements in the description must be clear and sufficient enough that **a person skilled in the art can carry out** the claimed invention.

“A person skilled in the art” means someone who satisfies the following conditions (i) and (ii):

(i) a person capable of using ordinary technical means for research and development (including document analysis, experimentation, analysis, and manufacturing); and

(ii) a person capable of exercising ordinary creativity such as the selection of materials and modification of designs.

I. Enablement Requirement



B. Legislations for Enablement Requirement

The Enablement Requirement is the requirement that is stated in the patent law of each patent office.

	JPO	EPO	USPTO	SIPO	KIPO	PCT
Enablement Requirement	Art.36(4)(i)	Art.83	Art.112(a)	Art.26	Art.42(3)1	Art.5



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Enablement Requirements are stipulated by the patent laws of each country and by treaties.

In Japan, these are stated in Article 36, paragraph (4), item (i) of the Japanese Patent Act.

In Europe, they are stated in Article 83 of the European Patent Convention.

In the U.S.A., they are stated in Article 112 (a) of the U.S. Patent Law.

In China, they are stated in Article 26 of the Chinese Patent Law.

In Korea, they are stated in Article 42, paragraph (3), item (i) of the Korean Patent Law.

Under the Patent Cooperation Treaty (or PCT), they are stated in Article 5.

C. Examples of Lack of Enablement Requirement

1. Improper Statement of Modes for Carrying Out the Invention

(1) Pencil Lead 1/2

[Claim]

A pencil lead consisting of carbon and pores wherein the relationship between

- the percentage of the volume of pores (A%) of a pore size (a) of $0.002 \leq a \leq 0.05$ (μm) and
- the percentage of the volume of pores (B%) of a pore size (b) of $0.05 < b \leq 0.20$ (μm)

is represented by $1.1 < A/B < 1.3$, $A+B \geq 80\%$.



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Now let's look at some examples where the Enablement Requirement has not been adequately addressed.

The first example of violation is an improper statement of modes for carrying out the invention.

This is an example of the invention of pencil lead.

The claim states as follows.

A pencil lead consists of carbon and pores wherein the relationship between

- the percentage of volume of pores (A%) of a pore size (a) of $0.002 \leq a \leq 0.05$ (μm) and
- the percentage of volume of pores (B%) of a pore size (b) of $0.05 < b \leq 0.20$ (μm)

is represented by $1.1 < A/B < 1.3$, $A+B \geq 80\%$.

I. Enablement Requirement



C. Examples of Lack of Enablement Requirement

1. Improper Statement of Modes for Carrying Out the Invention

(1) Pencil Lead 2/2

[Outline of the Description]

- The purpose of the present invention is to provide a pencil lead which has proper strength and offers a good writing feel.
- It is found that said purpose can be achieved when the pores in the pencil lead meet certain conditions.
- However, there is no specific statement as to the manufacturing conditions.

In order to prepare proper manufacturing conditions, a person skilled in the art would have to make trials and errors or conduct complicated experimentation, **beyond the reasonably-expected extent.** ➡ **Unable**



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On the other hand, the outline of the description is as follows:

- The purpose of the present invention is to provide a pencil lead which has proper strength and offers a good writing feel.
- It has been found that the aforementioned objective can be achieved when the pores in the pencil lead meet the conditions specified in the claim.
- However, there is no specific statement on the manufacturing conditions. In addition, the manufacturing conditions are not common general knowledge as of the filing date.

In order to prepare proper manufacturing conditions, a person skilled in the art would have to proceed by trial and error or conduct complicated experiments **beyond the extent of reasonable expectations.** In other words, even a person skilled in the art cannot manufacture the pencil lead in the claimed invention.

A case like this cannot meet the Enablement Requirement.

I. Enablement Requirement

C. Examples of Lack of Enablement Requirement

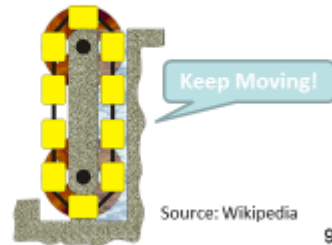
1. Improper Statement of Modes for Carrying Out the Invention

(2) Perpetual Motion Machine

Successful performance of the invention is inherently **impossible**, because it would be contrary to well-established physical laws.

➡ **Unable**

JPO regards a perpetual motion machine as a non-statutory invention.



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Another example of an improper statement of modes for carrying out an invention can be seen in the case of perpetual motion machines, which are hypothetical devices that can keep moving indefinitely without an energy source.

They are inherently impossible to be implemented because they would contradict well-established physical laws.

So perpetual motion machines do not meet the Enablement Requirement.

Furthermore, they are closely related with patentable subject matter.

A perpetual motion machine is considered to be a non-statutory invention in JPO and a non-industrial applicable invention in EPO.

I. Enablement Requirement



C. Examples of Lack of Enablement Requirement

2. Part of Claim Not Supported by Modes for Carrying Out the Invention

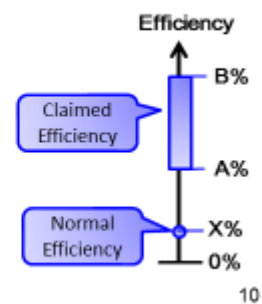
(1) Hybrid Car 1/2

[Claim]

A hybrid car of which energy efficiency during running on electricity is a – b%.

[Description]

Only “Y control” is stated in the description as an embodiment to obtain a – b% efficiency.



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The next example of a typical violation is a partial disclosure, where the claimed invention is overly generalized and the working example supports only part of it.

This is a specific example that falls into this type of violation.

The claim says, “A hybrid car of which energy efficiency during running on electricity is from a% to b%.”

And only a “Y control” is stated in the description as an embodiment to obtain “from a% to b%” efficiency.

As shown in the figure on the right, the claimed efficiency is much higher than X%, which is the typical efficiency of normal hybrid cars.

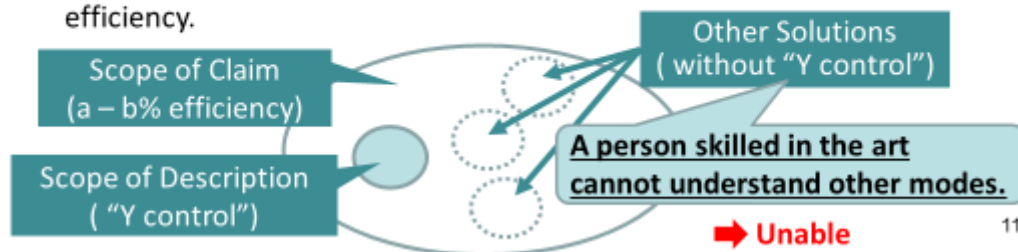
I. Enablement Requirement

C. Examples of Lack of Enablement Requirement

2. Part of Claim Not Supported by Modes for Carrying Out the Invention

(1) Hybrid Car 2/2

- In the technical field of the hybrid car, it is common general knowledge, as of the filing date, that it is difficult to realize higher energy efficiency such as $a - b\%$.
- The statement on the hybrid car equipped with “Y control” does not show the common solving means for realizing the aforesaid high energy efficiency.



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In the technical field of the hybrid car, it is common general knowledge as of the filing that it is difficult to realize higher energy efficiency such as from $a\%$ to $b\%$.

The description does not disclose any common means for realizing the aforesaid high energy efficiency except for the “Y control” .

Under these conditions, a person skilled in the art would not be able to understand cases other than the case with the “Y control” , which are included in the claim.

Thus, the description is not stated sufficiently as to enable a person skilled in the art to carry out the claimed invention to the full.

- I. Enablement Requirement
- II. Other Requirements**

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Now, let's look at the other requirements.

II. Other Requirements



A. Prior Art or Background Art in the Description

- The description should also mention any background art of which the applicant is aware, and which can be regarded as useful for understanding the invention and its relationship to the prior art
- Identification of documents reflecting such art, especially patent specifications, should preferably be included.



Name of publication shall be stated

	JPO	EPO	USPTO	SIPO	KIPO	PCT
Prior Art Requirement	Art.36(4)(ii) (Guideline)	Rule42(1)(b)	(Guideline)	Rule 17(2)	Art.42(3)2	Rule5.1(a)(ii)

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Prior Art or background art of which the applicant is aware should be stated in the description.

They are useful for understanding the invention and its relationship to the prior art.

Identification of documents reflecting such art, especially patent specifications, should preferably be included.

Most patent offices require disclosure of information on prior art.

The JPO requires the name of publication(s) known to the applicant at the time of filing.

II. Other Requirements

B. Computer Software-Related Inventions

- **Program listings** in programming languages cannot be relied on as the sole disclosure of the invention.
- The description, as in other technical fields, should be written substantially in **normal language**.
- Short excerpts from programs written in commonly used programming languages can be accepted if they serve to illustrate an embodiment of the invention.

```
#include <stdio.h>
int main(void)
{
    printf("Hello, world!");
    return 0;
}
```



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The last topic of this lecture is requirements for description on particular technological fields, specifically, computer software related inventions and biological inventions.

Program listings in programming languages cannot be relied on as the sole disclosure of the invention.

The description, as in other technical fields, should be written substantially in normal language.

Short excerpts from programs written in commonly used programming languages can be accepted if they serve to illustrate an embodiment of the invention.

II. Other Requirements



C. Biological Inventions

1. Sequence Listing

- Where the application contains disclosure of one or more nucleotide and/or amino acid sequences, the description should contain **a separate sequence listing part** complying with the standard.



2. Biological Material

- Where the application refers to biological material which cannot otherwise be described in the application to meet the sufficiency of disclosure requirements, the **deposit** of such material is taken into consideration when determining whether those requirements have been met.



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Where the application contains disclosure of one or more nucleotide and/or amino acid sequences, the description should contain a separate sequence listing parts complying with the standard.

Where the application refers to biological material which cannot otherwise be described in the application to meet the sufficiency of disclosure requirements, the deposit of such material is taken into consideration when determining whether those requirements have been met.