

## **1. Inventive Step**

### **(i) The definition of a person skilled in the art**

“A person skilled in the art to which the invention pertains” (referred to as “a person skilled in the art”) refers to a hypothetical person who has common general knowledge in the art to which the claimed invention pertains and the ability to use ordinary technical means for research and development (including experiment, analysis, and manufacture); who has the ability to exercise ordinary creativity in selecting appropriate materials, optimizing numerical range of the invention, and replacing the invention with equivalents, etc.; and who is able to comprehend all technical matters regarding the state of the art in the field to which a claimed invention pertains at the time of filing based on his/her own knowledge.

(Examination Guideline Part 3 Chapter 3, Section 3)

### **(ii) Methodologies employed for evaluating the inventive step**

When determining the inventive step, it is decided whether claimed invention could have been easily made by a person skilled in the art based on prior art, prior to filing. If claimed invention could have been easily made by a person skilled in the art, alone or by combining the cited prior arts, the invention in the claims is considered to lack an inventive step. (Patent Act, Article 29(2))

The examiner shall make efforts to consider the overall state of the art that a person skilled in the art would consider at the time of filing and, at the same time, shall thoroughly consider the purpose, technical structure, and advantageous effects of the invention while paying attention to the description, drawings and the opinion of the applicant, comprehensively determining whether the claimed invention has the inventive step in consideration of its specific purpose and effectiveness, and focusing on the difficulty of the technical structure of the claimed invention.

The examiner shall determine the inventive step by considering whether, from the point of view of one or ordinary skill the art, the claimed invention has any advantageous effects over

a cited prior art while mainly focusing on whether the cited prior art provide any motivation to a person skilled in the art to reach the subject matter of the claimed invention or whether the difference between the subject matter of the prior art and that of the claimed invention can be considered as a mere exercise of ordinary creativity.

The procedure of determining the inventive step is as follows.

- Step 1: The examiner specifies an invention for which an applicant requests grant of a patent.
- Step 2: The examiner specifies a cited prior art.
- Step 3: The examiner chooses a cited prior art which is the closest to the claimed invention and makes a clear difference by comparing the cited prior art with the claimed invention. In doing so, the examiner shall take into consideration the structural combination of the elements of an invention. More specifically, structurally combined elements of an invention shall be compared as one integrated unit (without being separated) with their corresponding elements in the cited prior art.
- Step 4: The examiner determines whether an invention described in the claims could have been easily made by a person skilled in the art, in view of cited prior arts or the common general knowledge before the filing, even though there is a difference between the claimed invention and the cited prior art.
- If there are two or more claims, the examiner determines whether each claim has the inventive step or not.

(Examination Guideline Part 3 Chapter 3, Section 4, 5)

**(iii) Having regard to the prior art, the level of inventiveness (obviousness) to meet the inventive step requirement**

A criterion to determine inventiveness is whether a person skilled in the art could have easily conceived the invention described in the claims by exercising ordinary creativity or based on motivation induced from the invention.

Examiners mainly focus on whether the cited prior art provide any motivation to a person skilled in the art to arrive at the subject matter of the claimed invention or whether the

difference between the subject matter of the prior art and that of the claimed invention can be considered as a mere exercise of ordinary creativity of a person skilled in the art. In addition, any advantageous effects over the prior art should be also considered.

For example, replacement with equivalents, workshop modification of a design in applying a specific technology, partial removal of technical features, simple change and limitation of use of the invention, and general application of known art fall into the category of ordinary creativity of a person skilled in the art. Therefore, when the differences between the claimed invention and the prior art fall only under these categories, generally, the inventive step of the claimed invention can be denied unless there is another ground for assessing the inventive step.

(Examination Guideline Part 3 Chapter 3, Section 3-6)

## **2. Sufficiency of Disclosure**

### **(i) Enabling disclosure requirement**

Description of an invention shall be provided in a clear and detailed manner to ensure that any person with ordinary knowledge in the technology sector to which the relevant invention belongs can easily carry out an invention.(Patent Act, Article42(3)( i ))

‘Easily carry out’ refers to a person skilled in the art fully understands the invention and reproduces it with the level of the technology at the time of filing by referring to the specification, without adding special knowledge, or undergoing excessive trial and error or repetitive experiment.

Where a product invention is disclosed in claims, the description of the invention shall contain the clear and full explanation on features allowing a person skilled in the art to produce the product. In general, to make manufacturing of a product possible, the manufacturing process needs to be fully specified (Except for the case where the product can be manufactured based on the specification and drawings with the level of technology at the time of filing even in absence of the description of the manufacturing process). Also, the

concerned product needs to be fully grasped from the whole statement of the description of the invention and the roles and functions of each special technical feature that specifies the product shall be stated together.

In addition, a product invention shall be fully stated so that a person skilled in the art can use the product disclosed in the claims. In order for a product to be available for use, meaningful and specific use of the product needs to be stated in a technical manner. However, it shall be an exception where, even without the description of use of the product, the product can be used based on the specification and drawings with the level of technology at the time of filing.

Where a process invention is disclosed in claims, the description of the invention shall contain the clear and full explanation on features allowing a person skilled in the art to use the process. In general, to make use of a process possible, the process needs to be fully grasped from the whole statement of the description of the invention and the roles and sequences of each step that specifies the process shall be stated together.

Where a manufacturing process invention is disclosed in claims, the description of the invention shall contain the clear and full explanation on feature allowing a person skilled in the art to produce a product with the manufacturing process. In general, to make manufacturing of a product possible based on its manufacturing process, the manufacturing process itself needs to be fully grasped from the whole statement of the description of the invention and the roles and sequences of each step that specifies the manufacturing process shall be stated together.

The manufacturing process of a product generally consists of a series of detailed steps dealing with raw materials. Therefore, raw materials for manufacturing the product and a series of the detailed steps shall be fully explained. The product manufactured through the concerned process shall be clearly stated, except for the case where the product is easily understood based on the raw materials or detailed manufacturing steps without specific statement.

The description of chemical substance invention may not be enough if only the name of the concerned chemical substance or the chemical formula is stated. It is because chemical reaction which is expected to draw the certain chemical substance, in reality, may not happen

because of unexpected causes and also the invention itself, as well as its possible effect, may not be grasped without direct experiment, confirmation and analysis. Therefore, as for chemical substance invention, the detailed manufacturing process of the chemical substance, let alone the description of the chemical substance itself, shall be stated, except for the case where a person skilled in the art would easily understand the chemical reaction disclosed in the specification based on the level of technology at the time of filing.

As for chemical substance invention, its embodiment shall include the detailed response conditions necessary for manufacturing the substance invention such as the starting material, temperature, pressure, inflow and outflow and the result of the direct experiment under such conditions.

Especially, as for medicinal use invention, description of medical data proving that the subject matter of the invention contains the same medical effect or description detailed enough to replace such medical data shall be disclosed except for the case where mechanism indicating the medical was already well known before filing.

(Examination Guideline Part 2 Chapter 3, Section 2)

## **(ii) Support requirement**

The claims shall be supported by the description of the invention. (Patent Act Article 42(4)( i ))

The description of the invention serves as a written technical disclosure. This is a regulation to avoid that an invention not disclosed in the description of the invention is stated as claims and is granted a patent since it leads to the invention not disclosed in the description of the invention being unfairly granted a patent right.

Under Article 42(2) of the Patent Act, the description of the invention refers to the rest of the statements other than claims among the features disclosed in the specification attached to the patent application submitted by the applicant.

An examiner shall determine whether an invention disclosed in claims are supported by the

description of the invention based on whether a person skilled in the technical field to which the invention pertains can figure out the features corresponding to the invention disclosed in the claims are written in the description of the invention.

Whether the corresponding matters are disclosed in the description of the invention shall be determined by thoroughly reviewing whether an invention out of the scope grasped by a person skilled in the concerned technical field based on the description of the invention is disclosed in claims, considering the purport of Article 42(4)( i ) of the Patent Act rather than literal identicalness between the claims and the description of the invention.

Cases where an invention disclosed in claims is not supported by the description of the invention include the followings :

- Where the features corresponding to those in claims are neither disclosed nor implied in the description of the invention
- Where the features disclosed in claims are means or steps to perform particular functions, but specific composition corresponding to such means or steps is not disclosed in the description of the invention
- Where the content disclosed in the description of the invention cannot be extended or generalized to the scope of the claimed invention based on the level of technology of the concerned technical field at the time of filing
- Where a claim fails to disclose the component explained in the description which is essential to solve the technical problem and therefore, it is deemed that the claim discloses an invention is out of scope which a person skilled in the art can recognize from the description of the invention

(Examination Guideline Part 2 Chapter 4, Section 3)

### **(iii) Written description requirement**

Descriptions of an invention shall be provided in a clear and detailed manner to ensure that any person with ordinary knowledge in the technology sector to which the relevant invention

belongs can easily carry out an invention (Patent Act Article 42(3)( i )); Background art shall be stated. (Patent Act Article 42(3)( ii ))

*See above 2.(i) Enabling disclosure requirement for more details of Article 42(3)( i ) of the Patent Act.*

Background art of Article 42(3)(ii) of the Patent Act shall be related to an invention for which patent protection is sought, i.e. claimed invention.

An applicant shall disclose the detailed explanation on the background art in the box [Background Art] of the description of the invention. It is recommended to write the information on prior art literature where such background art is disclosed. The information on prior art literature contains the country of publication, the name of gazette, publication number, publication date for patent literature and the name of author, title of publication (title of thesis), publisher, date of publication, etc. for non-patent literature.

Where multiple prior art literatures exist, the literature(s) closest to the invention shall be disclosed.

However, even if only the information on prior art literature is disclosed, not the detailed explanation on the background art, where the prior art literature describes proper background art of the invention, the background art of the invention shall be deemed to be disclosed.

Where the background art cannot be distinguished since the concerned invention is developed based on novel ideas totally different from existing technology, the description of the background art of the invention can be replaced with the disclosure of existing technology of the closest technical field or the description of difficulty finding proper background art.

(Examination Guideline Part 2 Chapter 3, Section 4)

Also, Article 21 of the Enforcement Rules of the Patent Act suggests items which shall be stated in the description. Applicants shall state the items enabling examiners or third parties

to easily understand what technical advances the invention would bring, including the title of the invention, the technical field, the technical objectives that the invention intends to achieve, technical problems to be solved, the means for solving technical problems, effect of the invention, brief description of drawings, details for working the invention, and other necessary items for a better understanding of the content of the invention by a person skilled in the art.

However, the above-mentioned items do not need to be separately disclosed. Where such items are understood from the overall content of the description of the invention, it shall be deemed sufficient.

An item not stated due to the features of the invention for which patent protection is sought may be omitted.

(Examination Guideline Part 2 Chapter 3, Section 3)

*Note: The English version of the Examination Guideline is available at*

[http://www.kipo.go.kr/kpo/user.tdf?a=user.english.html.HtmlApp&c=92006&catmenu=ek03\\_06\\_01](http://www.kipo.go.kr/kpo/user.tdf?a=user.english.html.HtmlApp&c=92006&catmenu=ek03_06_01)