

Republic of Korea

(i) A draft reference document on the exception regarding the exhaustion of patent rights.

- Relevant court case

Supreme court decision 2017Da289903 decided January 31, 2019

If a patentee of a product invention or a licensee (hereinafter referred to as 'a patentee, etc.')

receiving a license to practice a patent has legitimately transferred a patented product that has been implemented in Korea, the purpose of a patent right for the transferred product has already been achieved and therefore exhausted. Therefore a patent right has no effect on acts, such as the use or transfer of a product by a transferee or an authorized person (hereinafter referred to as 'transferee, etc.'). It is samely applied to the case where a patentee, etc. of 'an invention of a process of manufacturing a thing' has legitimately transferred a product that has been manufactured by the patented process in Korea.

Where a patentee, etc. of a process invention, such as a patentee of 'an invention of a process of manufacturing a thing', has legitimately transferred a product used in the operation of the patented process in Korea, if the product has substantially embodied the process invention, a patent right has no effect on acts, that is, a transferee, etc. has implemented the process invention by using the product, because the purpose of a patent right of the process invention has already been achieved and therefore exhausted.

(ii) A study on the sufficiency of disclosure

1. Regarding inorganic and organic chemistry, including pharmaceuticals

- KIPO, Examination Guidelines (December 2021)

- Chemistry invention

When describing a description of the invention concerning a substance invention in the chemical field, it is insufficient to disclose a substance itself as a name of the chemical substance or its chemical structural formula, because even chemical reactions that seem to be naturally induced may not actually be carried out due to unexpected reactions; and it is hard to grasp the substance of the invention without direct experiment, confirmation and analysis; and the resulting effect is difficult to predict. Therefore when it comes to a substance invention in the chemical field, it is necessary for a certain process to be disclosed, besides expressing a substance itself, so as to easily reproduce a chemical substance (except the case where a skilled person in the art can easily understand a chemical reaction disclosed in the specification based on the common technical knowledge at the time of filing the application) [99Heo3177, 2000Heo6370]. As for a substance invention in the chemical field, to easily implement the invention, a description of the invention should disclose a certain reaction condition, such as specific starting materials, temperature, pressure, inflow and outflow, etc., necessary to manufacture the substance invention and a result of an experiment directly carried out under the condition as an embodiment. The same criteria is applied to a substance (a medicine, etc.) developed in silico experiment.

- Use invention (pharmaceuticals)

In case of a mechanical device, etc., its working effect can be easily understood and reproduced from features of the invention. On the other hand, as for an invention in the chemical field, even though it depends on the subject matter of the invention and its technological level, if a trial for presenting experimental data is not described, a skilled person in the art cannot be deemed to clearly understand the effect and easily reproduce the invention as the invention in the chemical field is far from predictable and feasible [2000Hu2958, 2003Hu1550, 2005Hu1417].

Therefore when it comes to a chemical use invention, only when a description of the invention discloses the effect of the invention is it deemed that the invention is completed and at the same time the sufficiency of the description is satisfied. Especially, a pharmaceutical use invention should disclose an example of a trial that “such a pharmacological effect is identified in a substance related to the invention” represented with pharmacological data, etc. or provide a specific description enough to replace the said trial, except in certain cases where the mechanism of action representing pharmacological effect described in the specification is clearly identified prior to the filing of the invention.

2. Regarding microorganisms:

○ Relevant legal provision

Article 2, Enforcement Decree of the Patent Act of Korea ① A person who intends to file a patent application concerning a micro-organism related invention shall deposit a microorganism in accordance with a process notified by KIPO Commissioner to an institution falling into any one of the following items before filing a patent application, except the case where a skilled person in the art can easily access the microorganism.

Article 3, Enforcement Decree of the Patent Act of Korea Where a person who intends to file a patent application concerning a microorganism related invention deposits a microorganism in accordance with a main body of Article 2(1) as he/she describes a specification (referring to the one attached originally to the patent application) in accordance with Article 42(2) of the Patent Act of Korea, he/she shall disclose a deposit number assigned by a domestic depository, an international depository, or a designated depository and a certain process of making an access to the microorganism where it is not deposited in accordance with a proviso of the same clause.

○ KIPO, Examination Guidelines (December 2021)

For a skilled person in the art to easily implement a microorganism-related invention, a specification shall be described as follows:

① Where a skilled person in the art can easily access a microorganism, a description of the invention shall be specifically described for a skilled person in the art to easily implement a process of obtaining the microorganism, a final product, from a starting material together with how to access microorganism, etc. to support reproduction of the invention.

② Where a skilled person in the art cannot easily access a microorganism and a description of the invention can hardly describe how to access the microorganism, a final product, from a starting material so as for a skilled person in the art to easily implement the process, reproduction of the invention can be supported by depositing the patented microorganism of a final product. However, even though a patented microorganism, a final product, is not deposited, reproduction of the invention can be supported by depositing a starting material of the microorganism and specifically describing how to obtain microorganism, a final product, from a starting material in a description of the invention so as for a skilled person in the art to easily implement the process.

- Microorganism Depository Institution

: A microorganism depository institution refers to a domestic depository institution registered in accordance with Article 58(2) of the Patent Act of Korea, an institution acknowledged as an international depository institution in accordance with a provision of Article 7 of 「Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure」 or a designated depository institution designated by a nation that is not a statutory member of 「Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure」 but its head of the patent office has agreed with KIPO Commissioner that same procedure with the one applied in Korea shall be applied to Koreans, when it comes to deposit of microorganisms for the purposes of patent procedure.

- Microorganism that is easily accessible

「Microorganism that is easily accessible」in accordance with Article 2 of Enforcement Decrees of the Patent Act of Korea is as follows:

- ① Microorganism that is commercially available
- ② Microorganism that is stored in an institution entrusted with the conservation of a microorganism prior to its filing and confirmed that said microorganism can be freely sold for sale through a catalogue, etc. issued by the conservation institution. In this case, the conservation institution and a conservation number of the said microorganism should be described in a specification at the time of filing of the application.
- ③ Microorganism that can be easily manufactured by a skilled person in the art based on a specification

3. Regarding Artificial Intelligence:

- KIPO, Examination Practice Guide by Technical Field, December 2020

- Basic principle

In an artificial intelligence-related invention, an embodiment requirement shall be determined based on whether a description of the invention is as clearly and concisely described as a skilled person in the art can easily implement the invention based on technological common knowledge at the time of the filing of the application.

For the purpose of easily implementing an artificial intelligence related invention, concrete improvement concerning artificial intelligence (AI) to embody in the invention should be disclosed for a skilled person in the art to clearly understand a certain means, a technical problem of the invention and its solving means, etc. A certain means for implementing an AI related invention encompasses training data, data processing method, training model, loss function, etc.

Even if a certain means for implementing an artificial intelligence related invention is not substantially described in a description of the invention or a drawing, where a skilled person in the art can clearly understand as taking into account technological common sense at the time of the filing of the application, it is not determined the invention cannot be easily implemented.

- Cases in violation

(1) Where a description of the invention abstractly discloses a technical step or function responding to the claimed invention but does not specify how to implement or realize the said step or the said function with a hardware or a software, and a skilled person in the art cannot easily figure out the claimed invention even as taking into account technical level at the time of filing the invention so the claimed invention cannot be easily implemented

(2) Where a description of the invention does not specifically disclose a correlation between input data as a specific means for implementing an AI related invention and output data of a trained model

Here, the case where a correlation between input data and output data of a trained model is specifically described means ① training data is specified, ② a correlation for solving a technical problem posed by an invention exists between characteristics of training data, ③ a training model or a training process is specifically described, ④ a training model is generated for solving a technical problem posed by an invention by way of training data or training process. However, where a skilled person in the art assumes or understands such a correlation through an embodiment disclosed in a description of the invention based on technological common sense at the time of filing of the application, embodiment requirement is deemed to be satisfied.

(3) Where a description of the invention discloses a hardware or a software for implementing a function of the claimed invention simply as 「block diagram」 or 「flowchart」, and it cannot be

easily figured out how hardware or software is implemented based on the said 「block diagram」 or 「flowchart」, and a skilled person in the art cannot clearly understand even as taking into account technical level at the time of filing the application so the claimed invention cannot be easily implemented

- Note

(1) If a claimed invention is characteristic in application of machine learning and can solve a technical problem by utilizing a general process of machine learning, and effect of the invention is verified, even if a general process of machine learning only is described, but a training model or a training process is not specifically described, embodiment requirement is deemed to be satisfied.

(2) In a machine learning based AI related invention, data processing for changing collected raw data into training data is deemed, in some cases, to be a main feature of the invention. In this case if a description of the invention does neither disclose (i) how to implement or realize a data processing step or function for producing, changing, adding or deleting collected raw data into training data nor specifically describe (ii) a correlation between collected raw data and training data, a requirement of embodiment is deemed not to be satisfied.

(3) As for an AI-related invention based on reinforcement learning, where a process for reinforcement learning, including a correlation between agent, environment, state, action and reward, etc., is not specifically described, embodiment requirement is deemed not to be satisfied. However, where a skilled person in the art can clearly figure out an invention related to the said reinforcement learning through an embodiment disclosed in a description of the invention based on technological common sense at the time of filing of the invention, embodiment requirement is deemed to be satisfied.