



To Have Your Cake and Eat It Too: Sufficient Disclosure of Inventions in the Light of the Polish Supreme Administrative Court's Judgment of 24 April 2022, II GSK 1724/18

Żaneta Zemła-Pacud

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Abstract The subject matter of this opinion is the Polish Supreme Administrative Court's judgment on the invalidity of a patent concerning a calcium-magnesium fertiliser due to its insufficient disclosure. This paper presents the course of the invalidation proceedings before the Polish Patent Office and administrative courts against the background of the Polish Industrial Property Law and the Polish Patent Office's Guidelines concerning sufficient disclosure of inventions. It also briefly refers to the EPC and EPO practice on the standards of sufficient disclosure, including the recent EPO decision G2/21. Finally, it offers approving comments on the judgment itself, notices the practical impossibility of remedying the failure to disclose enough and mentions current systemic challenges to the requirement of sufficient disclosure as a fundamental rule of patent systems.

Keywords Patents · Inventions · Sufficient disclosure · Know-how · Transparency

1 Introduction

The paradigm of granting patents in return for sufficient disclosure of an invention, which allows for its imitation after the protection expires, is a fundamental principle of patent systems.¹

A European standard of sufficient disclosure has been set in Art. 83 of the European Patent Convention (EPC), stipulating that European patent applications shall disclose the invention in a manner sufficiently clear and complete for it to be

¹ The theory underlying this concept is called the contract theory of patent law or, in common law jurisdictions, a quid pro quo bargain. See Denicolo and Franzoni (2004), pp. 365–366; Burke and Lemley (2002), p. 1186.

Ż. Zemła-Pacud (✉)

Ph.D.; Assistant Professor, Institute of Law Studies, Polish Academy of Sciences, Warsaw, Poland
e-mail: z.pacud@inp.pan.pl

carried out by a person skilled in the art.² Without a legal definition, the notion of the sufficiency of disclosure assumes substantial discretion in assessing how much and what specific data must be included in a patent application to deem the invention sufficiently disclosed. As such, it is a frequent reason for patent litigation, be it opposition or invalidation procedure. However, the requirement of sufficient disclosure also triggers an expanding discussion covering more systemic issues. Applications based on data generated by AI, i.e. the so-called “in silico studies”, raise questions about the possibility of reliance on post-published evidence to support the sufficiency of disclosure.³ Even further-reaching doubts concern patenting black box algorithms.⁴ Patents granted for highly advanced technological innovations provide sufficient disclosure of separate inventions but do not translate to the possibility of reproducing marketable products of technologies.

The commented judgment of the Polish Supreme Administrative Court of 24 April 2022⁵ is part of the debate concerning the extent of disclosure that should be sufficient for a sustainable patent system.⁶ The obvious advantage of not disclosing all the details of a technical solution in a patent application is the possibility of protecting them as know-how and building a competitive edge, especially if the product is not susceptible to reverse engineering.⁷ However, insufficient disclosure may result in dire consequences: in light of only limited options to remedy the failure, a sought patent may be refused, which, in the most optimistic scenario, leads to withdrawing an application and filing it again, risking its priority status. An already granted patent may be invalidated altogether, with the protection being irreparably lost. A prima-facie insight from the judgment is that considerable care is needed when drafting the patent description and claims to ensure that the sufficient disclosure criterion is duly observed. However, perhaps a more important one is that a more scrutinous examination of patent applications from the angle of sufficient disclosure is crucial to preventing unfounded patents from protecting what stays protected as trade secrets anyway.

2 Litigation

2.1 Invalidation Procedure

The litigation concerns a patent granted by the Polish Patent Office (PPO) for a granulated calcium-magnesium fertiliser. In 2015, an application for invalidation of

² This provision closely follows the requirement of sufficient disclosure set forth in Art. 8(2) of the Council of Europe’s Convention on the Unification of Certain Points of Substantive Law on Patents for Inventions, as agreed in Strasbourg in 1963. The Paris Convention did not entail the requirement of sufficient disclosure.

³ Früh (2021), p. 235.

⁴ You (2021), p. 193.

⁵ For a translation of the Polish Supreme Administrative Court’s judgment II GSK 1724/18 into English, see *Sufficient Disclosure of Patents* in IIC at <https://doi.org/10.1007/s40319-023-01338-3>.

⁶ See e.g. Cornish (1999), pp. 236–237; Frankel and Lai (2016), pp. 292–310; Ann (2022), p. 208.

⁷ The tendency can long be observed in scholarly literature, see e.g. Machlup (1961), p. 374.

this patent was filed based on Art. 89(1) of the Industrial Property Law (IPL).⁸ Invoking Arts. 24, 26, and – for the most part – 27 and 33(1–3) of the IPL,⁹ the applicant claimed that the patented invention was not sufficiently disclosed and put forward the following arguments:

- the terminology used in the patent description was unclear as regards product components;
- the patent description did not specify several features characterising the final product, including the size and composition of its granules; it did not disclose any experimental data that could shed more light on such granules (i.e. their size and composition);
- the description was rudimentary and omitted certain essential information, particularly the necessary technical steps to be undertaken as part of the production method;
- both the claims and patent description disclosed data on the raw materials used in the process in a palpably imprecise and incomplete way;
- to sum up, the disputed patent did not reveal the critical parameters of the granulation process, which made it impossible to carry out production of the fertiliser without conducting costly and time-consuming experiments.

The Patent Office invalidated the disputed patent arguing that it did not satisfy the requirement of industrial applicability under Art. 27 IPL. Specifically, it was said to fail to disclose the necessary technical features of the manufacturing method, which would enable its repeatable use. The PPO listed a long set of features that were missing in the patent description: certain fundamental information regarding the production method was sparse or simply missing, namely: incomplete information on the raw materials used in the process; incomplete information on the product itself; missing information on the addition of water or some other moisturising factor necessary in the granulation process; missing information on the streams generated as a result of segregation of dried granulate; missing data on the process parameters of the production; incomplete information on the devices used and unclear definitions and expressions used in the claim and patent description; the raw materials used in the production method by providing their physio-chemical characteristics and physical forms; and no experimental data were provided in order to obtain information on the physio-chemical characteristics of the granules produced under the contested method. In particular, the description did not disclose the content of magnesium in the ore, nor did it reveal any precise data characterising the structure of the magnesium lime or the quantity and ratio of its use.

In the opinion of the PPO, the manufacturing method should have been presented as a series of activities undertaken step by step and characterised by physical parameters (including the temperature, the time or the mixing speed) and specific technical means (raw materials) in terms of their quantity and quality, which would enable distinguishing three stages of the process taking place in the granulating

⁸ Industrial Property Law, the Act of 30 June 2000, Journal of Laws of 2013, item 1410, as amended.

⁹ Art. 27 requires industrial applicability; Art. 33(1–3) requires that the invention is sufficiently disclosed in the patent application as filed; see below in Sect. 3.

machine drum. Finally, the patent description did not disclose any information characterising the machine needed to implement the patented method, only indicating it was “a granulating machine drum”.

The Patent Office concluded that the content of the disputed patent (its description, model example and the one independent patent claim) fell short of disclosing all essential technical means, including raw materials and the devices used in the method.

2.2 Appeal Procedure Before the District Administrative Court in Warsaw

Despite numerous, solid arguments presented in the decision on the patent’s invalidation, the claimant appealed against the decision to the District Administrative Court in Warsaw.

The appeal was dismissed. In the opinion of the court, the Patent Office was correct to conclude that, on the date of filing, the disputed patent did not satisfy the requirement of industrial applicability under Art. 27 IPL because it did not disclose the necessary technical features of the production method enabling the repeatable use thereof. Knowing only such a general and imprecise technical teaching of the disputed patent, a third-party technology expert would be forced to carry out experimental work aimed at: (1) determining the amount, type and form of raw materials to be used in the production process; (2) determining additional reacting substances and technical means that were not mentioned in the patent; (3) determining particular process parameters of the individual stages of the production method; and (4) determining what devices should be used in the process and how they should be connected. The court indicated that the Patent Office adequately demonstrated and justified in detail that the patent description was incomplete and that important information concerning the production method had been omitted.

2.3 Cessation Procedure Before the Supreme Administrative Court

The claimant (now the “complainant in cassation”) subsequently filed a cassation complaint with the Supreme Administrative Court to have the judgment of the lower court and the decision of the Patent Office set aside.

The complainant in cassation raised a broad set of formal objections. The objection relevant to the analysed subject matter was that the court of first instance had erroneously interpreted Art. 27 IPL in connection with Art. 33(3) by finding that the patent in question was insufficiently disclosed and so was not industrially applicable.

The Supreme Administrative Court dismissed the allegation. It held that the court of first instance had given a correct explanation of why the invention in question was insufficiently disclosed and, consequently, why it was not suitable for industrial use (i.e. it did not satisfy the conditions laid down in Art. 27 IPL). The Supreme Administrative Court thus held that the disputed patent was not a complete solution for achieving a specific result without the necessity of pursuing additional solutions that could go well beyond ordinary adaptation procedures.

Having detailed the context, the Supreme Court confirmed that the description of the patent did not contain a sufficient characterisation of the three-stage granulation method due to the lack of: (a) complete data on the raw materials and parameters used; (b) data on the fertiliser granulate so obtained; (c) proper disclosure of the construction features of the granulation machine drum in connection with the subsequent stages of granulation; and thus (d) any possibility of obtaining a repeatable result. The Supreme Court agreed with the lower instance court that the disputed patent fell short of disclosing other crucial information about the subsequent technological stages of production not characterised by the parameters or device in which it is carried out. Last but not least, the very individual stages of the patented method were not characterised by obligatory technical means, which were not fully disclosed and information about which was simply missing from the patent description.

In this regard, the Supreme Administrative Court did not agree with the argumentation that the court of first instance was wrong to consider that the patent in question was insufficiently disclosed and unsuitable for industrial application. Hence the allegation of a violation of Art. 27 in connection with Art. 33 IPL by the court of first instance was held unfounded, and the cassation complaint was dismissed.

3 The Legal Framework for the Sufficiency of Disclosure in Polish Patent Law

Next to the criteria of patentability, the premise of sufficient disclosure plays a major role in creating boundaries for technical teaching deserving of patent protection. A clear and comprehensive presentation of the invention in the application is a fundamental aspect of patent protection since it is precisely the disclosure of an invention that justifies a system of patent protection in which an exclusive right for the use of a technical solution is granted in exchange for making that solution public.

The sufficiency of disclosure is recognised in the IPL in three contexts.

First, according to Art. 33 of the IPL, the description of an invention should depict it clearly and completely enough for it to be carried out by a person skilled in the art.

From the point of view of the examination procedure, the requirement of sufficient disclosure is subject to verification before the other premises of patentability, i.e. technical character, novelty, non-obviousness and industrial applicability of the solution. A negative answer, i.e. demonstrating a failure to disclose or insufficient disclosure of the solution, would make it impossible to carry out the next steps in examining the invention, thus terminating the examination procedure. The inability of the Polish Patent Office to verify the fulfilment of all other prerequisites, positive and negative, necessary for the granting of a patent leads to the refusal to grant a patent on the grounds of Art. 49(1)(2) of the IPL.¹⁰

¹⁰ Koczorowski (2022), p. 418. See also the judgment of the District Administrative Court in Warsaw, VI SA/Wa 2961/13.

Second, it has long been accepted in jurisprudence and in scholarship that sufficient disclosure is a *sine qua non* for the fulfilment of the industrial applicability criterion.¹¹ Taking this approach, industrial applicability consists of four essential component requirements: completeness, usability, reproducibility and sufficient disclosure of the invention.¹² The latter is understood as allowing for implementation of the invention without additional inventive input and excessive effort, going beyond routine work inherent in a given field of technology or mere adaptations.¹³

And last, despite sufficient disclosure being qualified as a necessary precondition for the criterion of industrial applicability, it was also explicitly named as one of the legal bases of patent invalidation. According to Art. 89(1)(2) IPL, an already granted patent may be invalidated in whole or in part at the request of a person who demonstrates that the invention was not disclosed sufficiently clearly and completely for it to be carried out by a person skilled in the art.

Remedying the insufficient disclosure of the invention is utmost difficult, if not impossible. It is irrelevant whether it has resulted from the under-development of the invention itself or poor drafting. In both cases, the options for correcting the application are very limited.¹⁴

It is possible to correct the claims, as was done in the present case. However, under Art. 55 IPL, only obvious mistakes and typographical errors may be fixed in a patent specification. This only exceptionally leads to such clarifications, which could render the disclosure sufficient.

At any stage of the patent life-cycle, particularly also at the stage of invalidity proceedings, patent claims can be amended, if technologically possible, by removing those claims that are not sufficiently supported and disclosed in the description.

Under Art. 37 IPL, until the final decision is issued, the applicant may introduce amendments to the description, which, however, may not go beyond what was disclosed on the filing date as the subject matter of the invention. Thus, it is not permissible to introduce into the filing description (including the claim and drawings) features that were not there on the filing date. Any corrections and additions may also not change the essence of the solution disclosed on the filing date. Any change to the content of the filing description by adding, modifying or eliminating information which, for the examiner, is not directly and unambiguously apparent from the original filing description should be considered as changing the subject matter of the solution and, consequently, to be inadmissible.

Specific rules on amendments to the description have been presented in the Guidelines of the Polish Patent Office President (Guidelines).¹⁵ A part of the Guidelines concerns amendments to the description, naming the following amendments inadmissible:

¹¹ See, for instance, judgment of the District Administrative Court in Warsaw, VI SA/Wa 2446/20, and earlier judgments cited there.

¹² VI SA/Wa 982/12, VI SA/Wa 1949/20.

¹³ See judgments of the District Administrative Court in Warsaw, VI SA/Wa 1112/08, VI SA/Wa 838/08.

¹⁴ Judgment of the District Administrative Court in Warsaw, VI SA/Wa 2211/07 *Legalis*.

¹⁵ <https://uprp.gov.pl/pl/przedmioty-ochrony/ogolne-wytyczne-prezesa-uprp>.

- the introduction into the description of any technical information that the average expert could not objectively deduce from the original application for the invention;
- introduction of additional examples, technical or biological data, particularly in the field of chemistry, which were not present in the original description of the invention; such information may be taken into account by the examiner as evidence or additional explanations when assessing the patentability of the invention and included in the case file, but may not be published as part of the invention description.¹⁶

However, it is permissible for the applicant to complete the state of the art, usually by reference to known documents. Other admissible corrections and additions include modifications to the title, description of the invention and patent claims aimed at unifying the content, including the category of the application, aligning the description of the invention and the title with the corrected claims, and corrections that are obvious to an expert in the context of the entire description. The addition of performance examples or advantages or effects of the solution is allowed only if these additional data were disclosed in the application, e.g. in the drawing, or can be unambiguously deduced from the invention description, claims or figures of the drawing.

The Guidelines do not indicate explicitly whether it is possible to present post-published evidence to support the sufficiency of disclosure. Further information on that matter is provided by the Guideline's section regarding disclosing pharmaceutical and biotechnological inventions,¹⁷ stating that the lack of sufficient disclosure of the invention cannot be remedied by later supplementing the application with additional information, including new examples of implementation, as this would constitute a violation of Art. 37 IPL.

The results of certain experimental studies or other additional data on the invention provided after the filing date of the invention application may be taken into account, but only if they are supplementary information providing additional support for what was disclosed on the filing date. These materials are not part of the application description; they remain in the application file.¹⁸ Although the Guidelines were issued long before the EPO Enlarged Board of Appeal's (EBoA) recent decision G2/21, they seem to be in conformity with it.¹⁹

Finally, the application can be withdrawn and resubmitted after the scope of the disclosure has been corrected. However, this decision must occur before the publication of the application; otherwise, the earlier application will nullify the novelty of the later one. Once the patent application is published, the possibility of correcting the insufficient disclosure and obtaining a patent is virtually non-existent.

¹⁶ <https://uprp.gov.pl/przedmioty-ochrony/ogolne-wytyczne-prezesa-uprp/wytyczne-w-zakresie-wynalazkow-i-wzorow-uzytkowych/niedopuszczalne-zmiany>.

¹⁷ <https://uprp.gov.pl/przedmioty-ochrony/ogolne-wytyczne-prezesa-uprp/wytyczne-w-zakresie-wynalazkow-i-wzorow-uzytkowych/farmacja-i-biotechnologia/ujawnienie-i-poparcie-wynalazkow>.

¹⁸ *Ibidem*.

¹⁹ See below.

4 Compliance of the PPO's Practice with EPO Case Law

The practice of the Polish Patent Office and the case law of Polish courts comply with the approach taken on sufficient disclosure in the EPO and presented in the EPO Guidelines.

As a rule, a detailed description of at least one way of carrying out the invention is required in the Guidelines.²⁰ A single example may suffice, but where the claims cover a broad field, the application is not usually regarded as satisfying the requirements of Art. 83 EPC unless the description gives several examples or describes alternative embodiments or variations extending over the area protected by the claims.²¹ If the claims define the invention, or a feature thereof, in terms of parameters, the application as filed must include a clear description of the methods used to determine the parameter values unless a person skilled in the art would know what method to use or unless all methods would yield the same result.²² In particular, the sufficiency of the disclosure cannot be acknowledged if the skilled person has to carry out a research programme based on trial and error to reproduce the results of the invention, with limited chances of success.²³

Like in the domestic procedure, if the disclosure is seriously insufficient, such a deficiency cannot subsequently be cured by adding further examples or features without offending against Art. 123(2) EPC, which requires that amendments may not result in the introduction of subject matter that extends beyond the content of the application as filed.²⁴ If, however, the deficiency arises only in respect of some embodiments of the invention and not others, it could be remedied by restricting the claims to correspond to the sufficiently described embodiments only, the description of the remaining embodiments being deleted.

It has long been accepted that sufficiency of disclosure must be satisfied at the date of the patent application, i.e. on the basis of the information in the patent application together with the common general knowledge then available to the skilled person. An important question that arose recently was whether insufficient disclosure could be remedied by reliance on post-published evidence. The EBoA considered this issue in its decision G2/21.²⁵ It recalled that, according to the EPO case law, only when certain evidence is available from the patent application may post-published (so-called) expert evidence then be taken into account, but only to back up the findings in the patent application concerning the use of the ingredient as a pharmaceutical, and not to establish the sufficiency of disclosure on its own. Having examined the usability of several approaches towards the potential reliance

²⁰ EPO Guidelines, Part F-IV.

²¹ Neither the EPO nor the national offices require the best or most beneficial mode of working the invention, *see* Früh (2021), p. 241; du Vall (2008), p. 204.

²² *See* EPO Guidelines, F-IV, 4.11.

²³ Decision T 38/11, Reasons 2.6.

²⁴ Guidelines, H-IV, 2.1; *see also* H-V, 2.2.

²⁵ G 2/21 (Reliance on a purported technical effect for inventive step) of 23 March 2023, ECLI:EP:BA:2023:G000221.20230323. The decision concerns mostly the scope of reliance on a purported technical effect for inventive step; however, in part, it also considers the possibility of reliance on post-published evidence for the assessment of sufficient disclosure.

on post-published evidence,²⁶ the Board adopted a strict one. It stated that the proof of a claimed technical effect must be provided in the application as filed, particularly if, in the absence of experimental data in the application, it would not be credible to the skilled person that the therapeutic effect is achieved. A lack in this respect cannot be remedied by post-published evidence.²⁷

Whereas the current EPO approach seems concise and clear enough, with the unstoppable development of AI and ML techniques, some challenges already loom in what may still look like science fiction today.²⁸

5 Comments on the Judgment

The judgment of the Supreme Administrative Court needs to be assessed as correct. With the degree of information missing in the patent description, it was unlikely that the courts would adjudicate differently. The arguments given by the patent holder could not be perceived as post-published evidence capable of changing the outcome of evaluating the sufficiency of disclosure; they did not resolve the objection of lacking industrial applicability of the patent.

The disputed invention is a *par excellence* incomplete solution which cannot be implemented without employing further solutions going beyond the normal adaptation measures. It resembles a preliminary concept, a general idea of a solution without sufficient evidence of its implementation, or a case where all the essential information was meant to remain undisclosed.

While the validity of the judgment itself is not in doubt, the question of the patent itself being granted with so much missing information is puzzling. Although, in the invalidation proceedings, the PPO, as well as the court of appeal and the Supreme Administrative Court, had no doubts that the patent should be revoked, the procedure lasted seven years. During this time, the patent remained in force, creating legal uncertainty regarding the patented substance and the freedom to operate with it for third parties. Although the patent holder's chances of obtaining a favourable judgment for himself were close to null, he initiated a judicial review of the Patent Office's decision and the cassation proceeding before the Supreme Administrative Court. In this case, these proceedings were not aimed at prejudging the validity of the obtained patent but precisely at prolonging legal uncertainty, which could have contributed to discouraging other entities from the market and providing an undeserved monopoly rent to the patent holder. This case painfully demonstrates the importance of patent offices' scrutiny in evaluating the fulfilment

²⁶ *Ab initio* plausibility, *ab initio* implausibility, no plausibility. See interlocutory decision of the Technical Board of Appeal in Case T 16/18 of 11 October 2021, ECLI:EP:BA:2021:T011618.20211011.

²⁷ G 2/21, point 77 of the Reasons – Intermediate conclusions.

²⁸ Ann (2022) poses questions about granting patent protection for inventions that, due to the lack of technical means, cannot be implemented at the date of filing but, according to expert assessment, are likely to become implementable in light of the expected technical development. See Früh (2021), pp. 246–250, who presents the whole plethora of looming challenges related to AI-created inventions and AI-only implementable inventions.

of the sufficient disclosure criterion and the need for high-quality patents to be granted.

Insufficient disclosure of the invention may be intentional, i.e. driven by the wish to keep secret part of the information crucial for implementing the patented solution. Especially in the case of inventions not susceptible to reverse engineering, applicants try to have their cake and eat it too; to obtain patent protection in case the undisclosed know-how gets revealed but, at the same time, to be able to rely on the indefinite protection of trade secrets, much longer than the 20-year patent monopoly. The requirement of sufficient disclosure is meant to secure a dichotomous division – either the solution in question is sufficiently disclosed and protected by a patent, or it is undisclosed and can be the subject of a trade secret.

With the advent of increasingly advanced technologies and narrowing technical specialisations, the disclosure requirement has changed how it counteracts the information asymmetry between the patent holder and the public, now bridging the positions of the patent holder and the experts in the field.²⁹ Such a status quo seems acceptable if the latter could always translate the disclosed invention into a usable product or technology. However, the paradigm of granting patent protection in return for sufficient disclosure of an invention hardly works in the case of products and technologies that combine hundreds, if not thousands, of patented solutions. Each of these individual inventions is sufficiently disclosed and theoretically reproducible. However, in practice, their selection and application to obtain a marketable product or technology are not subject to disclosure. In this respect, patent systems do not correspond to the technological reality of most advanced innovation. In the ICT area, this problem has been addressed by introducing standard-setting organisations, which create and disclose technical standards containing thousands of patented solutions. In the life sciences, attempts are being made to find private ordering mechanisms allowing access to the knowledge necessary to reproduce advanced diagnostic methods, biological drugs or biotechnological innovations.³⁰ Such fragmented solutions are, however, not sufficient to resolve the general, systemic issue; this needs further debate and a comprehensive legal response.

Finally, from the practical perspective, it needs to be underlined that failing to disclose an invention sufficiently is hard to repair. Unlike the level of non-obviousness, post-published evidence can only exceptionally influence the assessment of sufficient disclosure. The latter cannot directly contribute to adequate disclosure of the invention; it can only confirm that it was adequately disclosed at the filing date. The applicants need to be aware of the risks accompanying their invention's sparse disclosure – losing the priority date or losing protection altogether after the patent gets revoked or invalidated.

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²⁹ Früh (2021), p. 250.

³⁰ See Lenarczyk and Zemła-Pacud (2020).

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