

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 5 September 2023**

Case Number: T 1438/21 - 3.2.05

Application Number: 10776125.6

Publication Number: 2491288

IPC: F16L1/16, F16L1/20

Language of the proceedings: EN

Title of invention:

Methods of reel-laying a mechanically lined pipe

Patent Proprietor:

TechnipFMC Subsea France

Opponent:

Subsea 7 Limited

Relevant legal provisions:

EPC Art. 100(b), 111(1)
RPBA 2020 Art. 11

Keyword:

Sufficiency of disclosure (yes)
Remittal - (yes)

Decisions cited:

G 0001/03, G 0003/14, T 0608/07, T 0593/09, T 1811/13,
T 2341/17



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1438/21 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 5 September 2023

Appellant: TechnipFMC Subsea France
(Patent Proprietor) 1BIS Place de la Défense
Tour Trinity
92400 Courbevoie (FR)

Representative: Murgitroyd & Company
Murgitroyd House
165-169 Scotland Street
Glasgow G5 8PL (GB)

Respondent: Subsea 7 Limited
(Opponent) Brighton Road
Sutton SM2 5BN (GB)

Representative: Emily Teresa Weal
Keltie LLP
No.1 London Bridge
London SE1 9BA (GB)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 5 July 2021
revoking European patent No. 2491288 pursuant to
Article 101(2) and 101(3) (b) EPC.**

Composition of the Board:

Chairman T. Vermeulen
Members: O. Randl
A. Bacchin

Summary of Facts and Submissions

- I. The patent proprietor filed an appeal against the decision of the opposition division to revoke European patent No. 2 491 288 ("the patent").
- II. The opposition division was of the opinion that the patent did not disclose the invention defined in the claims as granted in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, and that the same was true for the claims according to auxiliary requests 1 to 5. Moreover, auxiliary requests 3 to 5 were found not to comply with the requirements of Article 123(2) EPC. Auxiliary request 6 was not admitted into the proceedings.
- III. Among the documents cited by the opposition division, the following are relevant to the appeal proceedings:
- E2 WO 97/34101 A1
- E8 Focke, E.S., "Reeling of Tight Fit Pipe", doctoral dissertation, TU Delft, 2007
- E9 Focke, E.S. et al, "The Influence of Heating of the Liner Pipe during the Manufacturing Process of Tight Fit Pipe", Proceedings of the Sixteenth International Offshore and Polar Engineering Conference, San Francisco, 2006, pp. 228-235.
- IV. With its statement setting out the grounds of appeal, the patent proprietor filed three affidavits referred to as E11, E12 and E13, respectively.
- V. Oral proceedings before the board took place on 5 September 2023.

VI. The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or, alternatively, that the decision under appeal be set aside and that the patent be granted in amended form according to the claims of the first or second auxiliary request underlying the decision under appeal, or according to the claims of the third, fourth or fifth auxiliary request filed with the statement setting out the grounds of appeal, or according to the sixth auxiliary request filed during the oral proceedings before the opposition division.

VII. The respondent (opponent) requested that the appeal be dismissed.

VIII. Claim 1 of the patent as granted (main request) reads as follows:

"A method of reel-laying a mechanically lined pipe (MLP) (2, 12) from a reel (10), said reel having a radius R , the MLP having a liner (6) and an outer pipe (4) with interference contact stress thereinbetween, the outer pipe (4) having a diameter D_H and a wall thickness t_H , the MLP having a radial insertion gap g , the method comprising at least the steps of:

(a) spooling the MLP onto the reel (10) in the complete or substantial absence of internal pressure above ambient pressure in the MLP;

(b) spooling off the MLP from the reel;

(c) straightening the spooled off MLP of step (b) to provide an MLP for laying;

(d) laying the straightened MLP; wherein the liner thickness is at least equal to the minimum liner thickness " t " calculated by formula two (II) :

$$\begin{aligned}
 t = & a_{00} (\varepsilon D^{0.75})^0 g^0 + a_{01} (\varepsilon D^{0.75})^0 g^1 + \\
 & a_{10} (\varepsilon D^{0.75})^1 g^0 + a_{11} (\varepsilon D^{0.75})^1 g^1 + \qquad \qquad \qquad \text{(II)} \\
 & a_{20} (\varepsilon D^{0.75})^2 g^0 + a_{21} (\varepsilon D^{0.75})^2 g^1 + 0.16
 \end{aligned}$$

wherein:

t is in mm:

a₀₀, a₀₁, are constants defined by Table 1:

<i>ij</i>	<i>a_{ij}</i>
00	2.39846
01	-0.239488
10	-5.48161
11	2.35153
20	6.50598
21	-1.37840

$\varepsilon = (D_H/2) / [(D_H/2) + R]$ is the maximum reeling strain,
g is in mm, and
D = D_H - 2t_H where D_H and t_H are in mm."

IX. Abbreviations

For the sake of brevity, the board has used the following abbreviations herein:

- CGK Common General Knowledge
- MLP Mechanically Lined Pipe
- RIG Radial Insertion Gap.

X. The relevant submissions of the parties can be summarised as follows:

(a) Sufficiency of disclosure (Article 100b) EPC)

(i) Respondent (opponent)

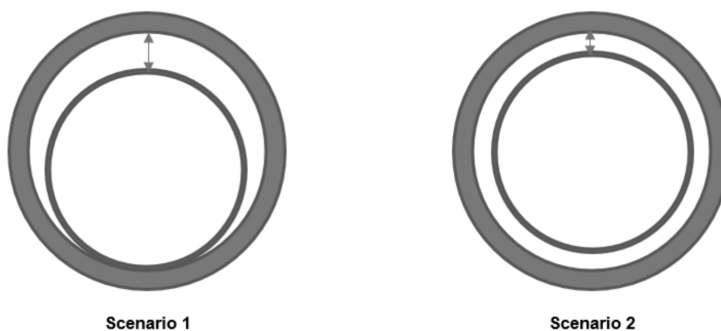
Three key questions need to be answered to establish whether there is a lack of sufficiency:

- Is there ambiguity in the definition of the radial insertion gap (RIG)?
- Does the ambiguity affect the entire patent? Or is there a way for the skilled person to resolve the ambiguity, using common general knowledge (CGK) or the teaching of the patent?
- Does the ambiguity hinder the skilled person from putting the invention into practice?

Ambiguity in the definition of the RIG

The first question has to be answered in the affirmative. The RIG is an inherently ambiguous parameter. Claim 1 concerns a method for reel-laying a mechanically lined pipe. The key inventive feature is that the parameters of the pipe satisfy formula II. The RIG is one of the parameters that flow into this formula. It is important for the skilled person to know what they need to put into the formula to determine whether they are working within the scope of claim 1. The RIG is **not defined** in the patent. There are several ways to interpret it. When the invention was developed, a specific definition of the RIG was used, but it is unknown what that definition was. The drafter of the patent withheld this piece of information. The RIG can be interpreted in different ways according to the

geometry of the situation and the working conditions, in particular whether or not the outer tube is heated when the liner is inserted. The gap could consist in a difference of diameters ("Scenario 1") or radii ("Scenario 2")



There is no standard definition on which the skilled person could have relied. Moreover, when the liner is inserted, there is no need for perfect alignment of the tubes. Therefore, a definition somewhere between Scenario 1 and 2 could also be considered.

There are various prior-art documents, such as documents E2 and E8, in which the tube is heated before the liner is inserted. The RIG can vary considerably between room temperature and the **temperature** to which the outer tube is heated. There may be a difference of as much as a factor of 4 in the RIG over 200°C. However, the patent does not teach the skilled person what RIG value is to be considered.

Another ambiguity worth mentioning is related to the **tolerance** of the measurements. Every measurement that flows into the RIG (the diameters and thicknesses of the components) has a tolerance. There are also variations across the pipe. It is not clear whether the average value, the maximum or the minimum is to be considered.

There is **no single, commonly understood definition** of the RIG. The skilled person has no inherent understanding of what this parameter is. The evidence filed by the appellant relating to the alleged common understanding is inconclusive. It actually confirms that there is no common understanding. For instance, documents E8 and E9 use Scenario 1, apparently at room temperature. By contrast, the appellant argued that Scenario 2 should be used when the tube is heated. Whether the method works in both cases is unknown. The appellant's assertion that it does is unsupported.

The affidavits filed by the appellant do not have evidentiary value. They simply state that the parameter would have been clear to the skilled person; they do not offer a quantitative definition of the RIG. They do not support the assertion that there was only one possible definition known to the skilled person. Moreover, the signatories were not working in this field at the time the patent application was filed.

Would the ambiguity have affected the skilled person?

The skilled person is hindered from carrying out the invention. The argument that the skilled person would have picked a definition and implemented it is unrealistic. In practice, there are physical limitations as to what the skilled person can do. Depending on how the RIG is defined, the minimum thickness obtained via formula II can vary considerably. However, the skilled person cannot simply use a very thick liner to ensure it definitely satisfies formula II regardless of how the RIG is defined, as there are limitations as to how thick the liner may be (see, for example, Table 2 from the second

priority document of the patent, GB 201009088, which is reproduced below and which provides evidence in this respect).

Table 2

Pipe size	Range of host pipe thickness (mm)	Range of radial insertion gap (mm)	Range of reel hub radius (m)	Range of reelable liner thickness (mm)
6.625" (168.3 mm)	11.1-25.0	1.0-5.2	8.23-10.5	1.8-4.1
8.625" (219.1 mm)	12.7-25.0	1.0-6.2		2.0-6.3
10.75" (273.1 mm)	14.3-25.0	1.0-7.1		2.7-8.8
12.75" (323.9 mm)	15.9-25.0	1.0-8.0		4.3-10.4

When asked whether the skilled person would have been aware of these limitations, the respondent explained that claim 1 contained no new teaching in respect of reel-laying. It merely described conventional reel-laying. The patent's only contribution consists in formula II. There are many interrelated parameters to be considered. The skilled person has to figure out what can be reeled and what the actual limitations are. There is a considerable burden on the skilled person to figure out how the promised results can be achieved. Determining whether an MLP works satisfactorily is not an easy process. If a precise definition of the RIG had been provided, the skilled person would have had at least some way of carrying out the invention and they could have found parameters that would work. The skilled person could not have done so for every possible definition of the RIG. Moreover, in view of the high cost of the liner material, the skilled person could not risk using a definition of the RIG that would entail an unnecessarily thick liner.

The examples in the patent do not provide sufficient information for the skilled person to reproduce the

invention. They simply state a value for the gap, which is close to conventional values. All the inventors have done is "assume" a value (see paragraph [0066] of the patent). This is of no use for the skilled person trying to carry out the invention. The second priority document shows what is going on behind the scene: in Example 1 (see pages 19 to 21), a different RIG value (4 mm instead of 3.2 mm in the patent) was "assumed". In actual testing, a 3 mm liner was used.

There are relevant decisions of the boards of appeal that deal with ambiguous parameters. The actual criterion used in all these cases is not whether the skilled person can reproduce one embodiment, for example, but whether they can carry out the invention over the entire scope of the claim with a reasonable degree of certainty and without undue burden. The skilled person must not be put in a situation where they need to carry out endless testing to determine whether or not something is within the scope of the claim, whether or not they are satisfying the formula or whether or not they are achieving the technical effect. They need a reasonable degree of certainty that they are able to put the invention into practice. None of these criteria is satisfied without a definition of the parameter. Testing whether the level of wrinkles generated during the reel-laying is acceptable is difficult and expensive.

Concerning the balance of sufficiency of disclosure and clarity, the case law acknowledges that an ambiguous parameter can result in insufficiency of disclosure. Decision T 2341/17 relates to a situation that is precisely in line with the situation underlying the present case. Also, the question of the promise of the invention is significant. According to decision

T 593/09, sufficiency of disclosure cannot be denied just because a claim contains an ambiguous parameter such that the skilled person would not have known whether they are working within or outside the scope of the claim. What is decisive for establishing insufficiency is whether the parameter is so ill-defined that the skilled person would not have been able, on the basis of the disclosure as a whole and using their CGK, to identify without undue burden the technical measures necessary to solve the problem underlying the patent at issue (see point 4.1.4 of the Reasons for the decision). See also decision T 608/07, point 2.5.2 of the Reasons for the decision.

(ii) Appellant (patent proprietor)

The assertion that the precise meaning of the RIG is ambiguous is nothing but a clarity objection. The real question to be answered is whether the skilled person can reel-lay an MLP as claimed, in light of the description and using their CGK. The parties agree that there has to be a gap when the liner is inserted into the outer pipe, regardless of whether or not the pipe is heated and regardless of what the ambient temperature is. Moreover, the RIG is a "radial" insertion gap. This necessarily refers to a measurement in the direction of the radius. The skilled person would have understood the RIG to be the gap that is measured along the radius when the liner is inserted into the tube and the liner and the tube are coaxially aligned. There is no ambiguity in this respect. When carrying out the invention, the skilled person would follow the examples given in the patent. The fundamental point of formula II is to define a minimum liner thickness, so that the required amount of the expensive liner material is minimised. As stated in

paragraph [0032] of the patent, formula II allows pre-installation calculations to be carried out. These calculations are based on certain assumptions, such as a reasonable value for the RIG, based on CGK, see paragraph [0066] of the patent. In this context, the verb "assume" is to be understood according to its usual dictionary meaning: a value is "assumed" when it is selected to be inserted into formula II. Pipes with a liner having a thickness corresponding to the computed minimum liner thickness are then tested (see paragraph [0068] of the patent). The end goal is not to calculate the RIG, but to check whether the assumptions made in the pre-installation calculations yield satisfying results. The tests are not too difficult to be performed. The bending tests carried out by the patent proprietor prove this. Much of the respondent's argumentation goes beyond the boundaries of Article 100(b) EPC and in fact concerns inventive step ("Is the technical effect obtained?") or clarity ("Does the skilled person know whether they are working within the scope of the claim?"). The burden of proof for an alleged insufficiency of disclosure must be on the opponent. The respondent has not provided any evidence that the invention does not work, whereas the patent proprietor has provided working examples in the patent. It seems odd that the patent proprietor is being asked to provide even more evidence.

(b) Remittal to the opposition division

(i) Appellant (patent proprietor)

The appellant has requested remittal to the opposition division for a discussion of the other grounds for opposition raised by the opponent.

(ii) Respondent (opponent)

The opponent has not objected to a remittal to the opposition division.

Reasons for the Decision

1. Object of the invention

Claim 1 concerns a method of reel-laying a MLP, such as those used for submarine pipelines, from a reel 10 of radius R .

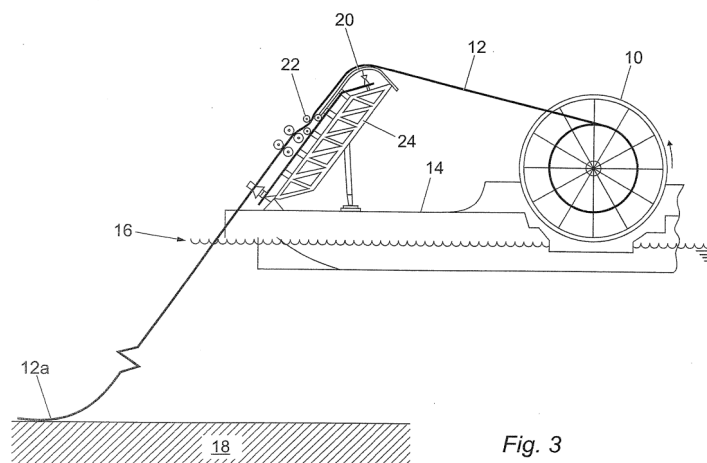


Fig. 3

The MLP has a liner 6, which can be made from a corrosion-resistant alloy such as 316L, and an outer pipe 4, e.g. a carbon steel pipe. The outer pipe 4 has an outer diameter D_H and a wall thickness t_H .

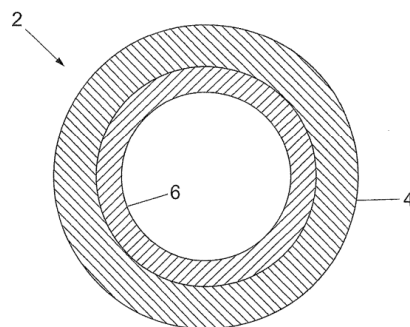


Fig. 1

First, the MLP is spooled onto the reel 10 at ambient pressure (step a). Subsequently, the MLP is spooled off from reel 10 (step b), straightened (step c) and laid (step d).

The invention aims at ensuring that the wrinkles in liner 6 that are generated when the pipe is bent (steps a and b) do not exceed a certain acceptable height (see paragraphs [0026] and [0052] of the patent).

The heart of the invention defined in claim 1 consists in the finding that the generation of wrinkles remains acceptable as long as the liner thickness is equal to or greater than the "minimum liner thickness" t that can be computed from the outer pipe diameter D_H and wall thickness t_H , the reel radius R , and the RIG g , using formula II (see point VIII. above).

2. Interpretation of the RIG

2.1 Preliminary observations

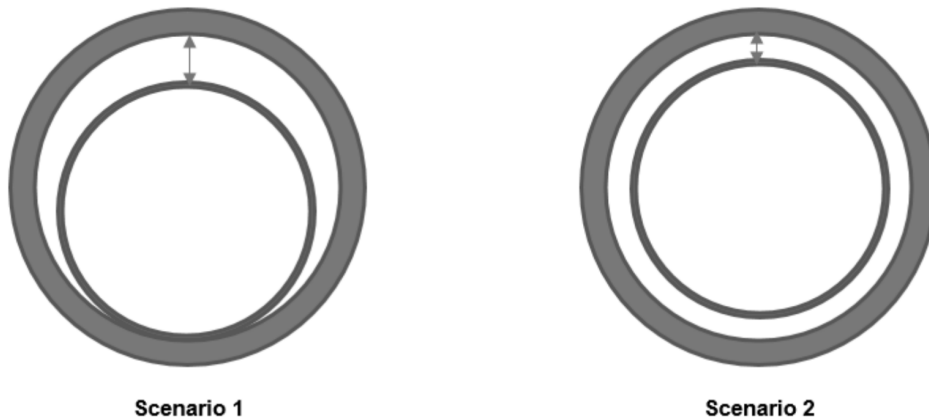
Claim 1 does not define the RIG. It is mentioned five times in the description of the patent: twice in paragraph [0012], which recites claim 1, and also in paragraphs [0023] and [0029] and in Table 3. None of

these paragraphs defines the RIG; nor do the drawings show a gap. In paragraphs [0066] and [0067], the shorter expression "insertion gap" is used, but it is clear from a comparison with Table 3 that the RIG is meant. However, these two paragraphs do not shed light on the definition of the gap because they only state that certain values are "assumed" for the gap.

The term "gap" usually designates "an unfilled space or interval" (Oxford English Dictionary). As the gap at issue here is an "insertion gap", the skilled person would have expected it to have been generated by the insertion of one element into another or to serve such an insertion. Considering that the gap belongs to the MLP comprising a liner and an outer layer, and that during the manufacture of the MLP the "liner is inserted into the outer layer" (see paragraph [0004] of the patent), the skilled person would have expected the RIG of claim 1 to correspond to the radial interval between the liner and the outer layer. This seems undisputed. However, the parties disagreed on how exactly the RIG was to be defined and whether or not there is in fact only one way it can be defined.

2.2 Scenarios

In this context, two scenarios were repeatedly discussed. According to Scenario 1, the RIG is defined as the difference between the inner diameter of the outer pipe and the outer diameter of the liner. In Scenario 2, the difference between the inner radius of the outer pipe and the outer radius of the liner is considered. Accordingly, the RIG according to Scenario 1 is twice the RIG according to Scenario 2.



The argument that Scenario 1 is not realistic because contact between the liner and the outer pipe has to be avoided during the insertion of the liner is not decisive because the respective radii or diameters are known and the determination of the RIG does not require the actual configuration shown in the drawings, let alone an introduction of the liner in contact with the pipe. Rather, the question is what the skilled person would have understood the RIG to be.

The argument that Scenario 1 is not unrealistic is supported to some extent by documents E8 and E9. However, these documents are theoretical studies involving finite element simulations. What their author calls the "initial gap between the liner pipe and the outer pipe" (see page xi of document E8) does not necessarily coincide with what the skilled person would have understood the RIG to be.

The affidavits E11 to E13 cannot establish with certainty that at the time of priority there was one single definition of the RIG that would have been self-evident to the skilled person, if only because none of the signatories of the declarations appears to have been working in the field of the patent at the time of

priority, so that it is doubtful whether they had a personal experience of the matter of the declarations.

The skilled person trying to implement the method of claim 1 as granted would most probably have understood the RIG in accordance with Scenario 2 because this definition of the gap is physically more meaningful and corresponds to the concentric structure of the MLP. Moreover, there is no well-defined radial gap in Scenario 1 because the value of the gap has different values depending on the azimuth value at which the gap is measured along a radial direction.

Nonetheless, it cannot be said that the skilled person would necessarily and exclusively have interpreted the RIG in this way. The patent's ambiguity in this respect cannot be entirely rectified by reasoning based on the relative likeliness of the various possible options.

2.3 Temperature

Another issue of disagreement concerns the temperature of the pipe at which the RIG has to be determined. As a consequence of the thermal expansion of the materials involved, the gap value will not be the same at every temperature. The patent simply does not dwell on this parameter. Consequently, the skilled person would have understood that the RIG is determined at the temperature at which the liner is inserted into the tube, whatever that temperature may be.

2.4 Tolerances

The tolerances involved in the measurement of the gap are irrelevant to the question of whether the ambiguity in the definition of the RIG would have hindered the

skilled person from carrying out the invention. In the field of mechanics, claimed objects are often defined using parameters, the tolerances of which are not discussed. As a rule, this does not hinder the skilled person from carrying out the invention. Under the present circumstances, the board sees no need to dwell on this issue.

3. Sufficiency of disclosure

3.1 Conclusions of the opposition division

The opposition division held that the ground for opposition under Article 100(b) EPC prejudiced the maintenance of the patent as granted. The justification for this finding is given in point 2.1 of the Reasons for the decision under appeal. The opposition division gave two main reasons related to the RIG.

First, the opposition division found that the patent "does not give any indications as to the conditions under which the radial insertion gap g has to be considered".

In this context, the opposition division first considered the fourth paragraph of the original application (page 1, line 30, to page 2, line 11), which discloses an economic method of forming a lined pipe. The liner is inserted into the outer layer, and then both parts are expanded radially. In a second step, the opposition division referred to documents E8 and E2, which disclose a method of forming a pipe in which the outer tube is heated. The opposition division then explained that the patent application as filed did not provide the skilled person with information about the "exact quantitative parameter" for gap g to be

inserted into the formula. The opposition division also understood the gap under consideration to be the "gap between the liner and the outer pipe". Based on the designation "radial insertion gap", it deduced that the size of the gap had to be considered "at insertion of the outer liner". However, in the absence of information on the method used for forming the MLP, the skilled person would not have known under which conditions the gap g was to be determined, and consequently would have been deprived of the benefit of the invention.

Second, the opposition division noted that the patent did not define the distance to be considered. Having examined documents E8 and E9, the opposition division found that in these documents the gap was understood to be the difference between the inner diameter of the outer pipe and the outer diameter of the liner, as according to "Scenario 1", and as distinct from "Scenario 2", according to which the gap is defined as the difference between the inner radius of the tube and the outer radius of the liner (see the drawings in point 2.2 above).

The opposition division concluded that the patent did not provide the skilled person with sufficient information for them to carry out the invention without undue burden.

3.2 Assessment by the board

3.2.1 Fundamental aspects

The ground for opposition under Article 100(b) EPC relates to patents whose invention is not disclosed in a manner sufficiently clear and complete for it to be

carried out by a person skilled in the art. When the invention consists in a method, it is necessary to examine whether the patent enables the skilled person to carry out that method.

The considerations that led the opposition division to conclude that the claimed method is insufficiently disclosed for it to be carried out by a person skilled in the art are based on the definition of the RIG, which is needed for computing the minimum liner thickness using formula II.

It is therefore necessary to examine whether this alleged deficiency hinders the skilled person from carrying out the claimed method.

In this context, it is important to ensure that an insufficiency objection arising out of an ambiguity is not merely a "hidden objection under Article 84 EPC", as noted in decision T 608/07 (see point 2.5.2 of the Reasons for the decision). This board (in a different composition) set out its view on this in detail in decision T 1811/13 (see point 5.1 of the Reasons for the decision). The fact that those skilled in the art would not know whether or not they are working within the scope of the patent is a finding related to the definition of the invention and thus a question of clarity (Article 84 EPC). However, the clarity of granted claims is not subject to examination by the board, as explained in decision G 3/14 of the Enlarged Board of Appeal. Therefore, arguments based on the skilled person's alleged inability to determine whether or not they are working within the scope of the patent are excluded from the board's scrutiny and must be ignored.

It is important to understand that, in accordance with the established case law of the boards of appeal, the "invention" mentioned in Article 100(b) EPC is defined by the subject-matter of the claims of the patent. Although an invention is commonly understood to be a technical solution to a problem, the problem allegedly solved by the subject-matter of the claim is not part of the "invention" within the meaning of Article 100(b) EPC if it does not find any expression in the claim.

This follows, in particular, from point 2.5.2 of the Reasons for the decision given by the Enlarged Board of Appeal in case G 1/03. In the context of its discussion of whether non-working embodiments could be excluded by means of disclaimers, the Enlarged Board first considered the case where the specification contains sufficient information for finding appropriate alternatives over the claimed range with reasonable effort. The Enlarged Board then went on to say:

"If this is not the case and there is a lack of reproducibility of the claimed invention, this may become relevant under the requirements of inventive step or sufficiency of disclosure. If an effect is expressed in a claim, there is a lack of sufficient disclosure. Otherwise, ie if the effect is not expressed in a claim but is part of the problem to be solved, there is a problem of inventive step..."

This means that unless a claim expresses the problem that is allegedly solved (or the effect that is allegedly achieved) by the claimed product or method, the question of whether this problem is actually solved (or this effect is actually achieved) might need to be addressed in the framework of inventive step, however

it is not relevant to the examination of whether the invention is sufficiently disclosed within the meaning of Article 100(b) EPC (see also "Case Law of the Boards of Appeal of the EPO", 10th edition, 2022, II.C.3.2).

3.2.2 Application to the present case

As stated above (see point 2.2), the definition of the RIG in the patent is ambiguous to some extent. A number of questions have to be answered by the skilled person when determining the RIG, and there is no single, commonly accepted response available. Consequently, the skilled person is left in some uncertainty as to whether or not a given MLP is actually within the scope of the patent. This would suggest that this scope is not sufficiently clearly defined. However, as it is not within the remit of the board to examine the clarity of granted claims, this question must remain unanswered.

It remains to be seen whether the ambiguity is such that the skilled person would have been hindered from carrying out the invention.

Having considered the circumstances of the case, the board has reached the conclusion that this is not the case. The reasons for this finding are as follows:

Claim 1 defines a method of reel-laying a mechanically lined pipe comprising a liner and an outer pipe. The method is defined via several steps and formula II, which establishes a condition for the minimum liner thickness. There is no expression of the allegedly solved problem or of an effect that is achieved by this method in the claim. In particular, there is no reference to the avoidance of wrinkling. Consequently, the question of whether the skilled person would have

been enabled by the patent to reduce or avoid wrinkling is not relevant to the examination of whether the invention is sufficiently disclosed within the meaning of Article 100(b) EPC.

The question to be answered by the board is whether the patent's ambiguity in respect of the RIG hinders the skilled person from carrying out the claimed method. The board has concluded that this is not the case. Claim 1 mentions "a radial insertion gap g ". It is not an undue burden for the skilled person to find a technically reasonable definition of the RIG (such as the definition according to Scenario 2 mentioned above, see point 2.2) and to calculate the minimum liner thickness t in accordance with formula II. The method steps (a) to (d) do not comprise anything going beyond the skilled person's CGK either. It is possible that when proceeding in that way, and in particular when using a RIG that differs from the one used by the inventors, the skilled person would not obtain an MLP that solves the problem of wrinkling. Although this finding might be relevant for the examination of inventive step, it does not mean that Article 100(b) EPC prejudices the maintenance of the patent.

The speculation that under certain circumstances the method might result in liner thicknesses that are not realistic does not lead to a different conclusion. It is not uncommon in the field of mechanics that a claim encompasses non-working embodiments. As a rule, the existence of such embodiments cannot justify the conclusion that the invention as a whole is insufficiently disclosed.

In light of the above, the board cannot unequivocally say that it is impossible to carry out the method.

3.2.3 Complementary observations

(a) Hesitation between scenarios

Even if those skilled in the art trying to carry out the method had hesitated between Scenarios 1 and 2, they could have calculated the minimum liner thickness according to both scenarios and used the greater value. In doing so, they would have carried out the claimed method, regardless of the "correct" scenario. The fact that this way of proceeding would have had undesirable consequences (such as too high a cost of the resulting MLP) does not mean that the method cannot be carried out within the meaning of Article 100(b) EPC.

(b) References to former decisions

Both in its written and oral submissions, the respondent provided an extensive discussion of board decisions in which the definition of a claimed parameter led the deciding board to conclude that the invention was insufficiently disclosed. The present board is of the opinion that such comparisons are of little value because the question whether an invention is sufficiently disclosed can only be decided on a case-by-case basis. Of course, it cannot be excluded that under certain circumstances, the lack of precision in the definition of a parameter may hinder the skilled person from carrying out the invention, but whether this is actually the case can only be decided on the basis of the individual facts of the case at hand.

3.2.4 Conclusion

The ground for opposition pursuant to Article 100(b) EPC does not prejudice the maintenance of the patent as granted.

4. Remittal to the opposition division

As the opposition division has not decided on the other grounds for opposition and no objections were raised against a remittal, the board is remitting the case to the opposition division for further prosecution (Article 111(1) EPC and Article 11 RPBA 2020).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



N. Schneider

T. Vermeulen

Decision electronically authenticated