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**Datasheet for the decision
of 26 May 2023**

Case Number: T 1076/21 - 3.3.05

Application Number: 14857559.0

Publication Number: 3064607

IPC: C22C38/00, C21D8/12, C21D9/46,
C22C38/60, H01F1/16

Language of the proceedings: EN

Title of invention:
GRAIN ORIENTED ELECTRICAL STEEL SHEET HAVING EXCELLENT
MAGNETIC CHARACTERISTICS AND COATING ADHESION

Patent Proprietor:
JFE Steel Corporation

Opponent:
thyssenkrupp Electrical Steel GmbH

Headword:
GRAIN ORIENTED ELECTRICAL STEEL/JFE Steel

Relevant legal provisions:
EPC Art. 100(b), 111(1)
RPBA 2020 Art. 13(2), 12(2)

Keyword:

Grounds for opposition - insufficiency of disclosure (no)
Amendment after summons - exceptional circumstances (no)
Appeal decision - remittal to the department of first instance
(yes)
primary object of appeal proceedings to review decision

Decisions cited:

G 0009/91, G 0010/91, T 0428/21, T 1002/20, T 0260/19,
T 1487/18, T 0942/18, T 0188/18, T 0055/18, T 1911/17,
T 1529/17, T 0720/17, T 2218/16, T 1596/16, T 0430/15,
T 0355/15, T 0347/15, T 0030/15, T 1608/13, T 1052/13,
T 0325/13, T 1746/12, T 1558/11, T 0480/11, T 0262/11,
T 0518/10, T 0338/10, T 2006/08, T 0066/07, T 0063/06,
T 1210/05, T 0072/04, T 0499/00, T 0376/95, T 0585/92,
T 0019/90, T 0182/89

Catchword:

The burden of proof regarding the facts, arguments and evidence on the substance (which initially lies with the opponent) does not shift to the proprietor just because the patent has been revoked due to an alleged insufficient disclosure.

It is down to the patent proprietor to substantiate on appeal why that decision is wrong. The burden of proof on the substance (and in consequence the benefit of the doubt), however, is only shifted when the opposition division's assessment that the presented facts, arguments and evidence were sufficient to discharge the opponent's burden of proof turns out to be correct.

(See item 1. of the grounds)



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Case Number: T 1076/21 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 26 May 2023

Appellant:

(Patent Proprietor)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 10 May 2021
revoking European patent No. 3064607 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman	E. Bendl
Members:	J. Roider
	P. Guntz

Summary of Facts and Submissions

I. The appeal from the patent proprietor (appellant) lies from the opposition division's decision to revoke the patent because it did not disclose the invention sufficiently clearly and completely (Article 100(b) EPC).

II. In the communication under Article 15(1) RPBA, the board expressed the opinion that the patent likely did fulfil the requirements of sufficiency of disclosure.

Thereafter, the respondent (opponent) filed a letter with Annex 1, a joint expert declaration.

III. Independent claim 1 of the main request (claims as granted) reads as follows:

"1. A grain-oriented electrical steel sheet provided on its sheet surface with a tension-imparting type insulation coating composed of a coating layer A formed on a steel sheet side and mainly composed of an oxide and a coating layer B formed on a surface side and mainly composed of glass, characterized in that a ratio R (σ_B/σ_A) of a tension σ_B of the coating layer B on the surface side applied to the steel sheet to a tension σ_A of the coating layer on the steel sheet side A applied to the steel sheet is within a range of 1.20-4.0."

Dependent claims 2-5 concern particular embodiments of claim 1, with dependent claim 4 of the main request reading as follows:

"4. The grain-oriented electrical steel sheet according

to any one of claims 1 to 3, wherein a coating weight of the coating layer A on the steel sheet side is 1.0-3.0 g/m² (both sides) as converted to oxygen."

IV. The respondent's key arguments are summarised below:

Article 100(b) EPC

Inconsistent examples

It was not possible to reproduce the invention reliably or with any certainty from the parameters disclosed in the examples. Although there were no differences between the manufacturing process, some samples fell within the scope of the invention while others did not. For example, samples 1, 6 and 11 of Example 1 were carried out with the same manufacturing process but the achieved product properties were significantly different, even to the extent that sample 11 fell outside the claimed range.

The decision under appeal suggested that this discrepancy was due to a variation of the coating weight of layer B. Yet the examples did not even indicate the coating weight of layer B; they only indicated the coating weight of layer A. It was not clear at which step of the manufacturing process this was measured.

The skilled person was thus confronted with an undue burden to experiment with various coating weights, without any guidance on how to do so.

Burden of proof

Due to the unusual parameter in claim 4, there was a weak presumption of sufficiency of disclosure. The opposition division had already been convinced by the reasoned arguments provided by the

respondent. There was no need to provide evidence. Since the opposition division revoked the patent, in accordance with T 585/92, the burden to provide proof that the patent was sufficiently disclosed shifted to the patentee.

The board's preliminary opinion surprisingly did not concur with the opposition division's decision. The respondent thus assumed that the burden of proof had been shifted back to it.

Admission of the respondent's last submission

Since the burden of proof had shifted back to the respondent due to the preliminary opinion, the board should give the respondent the opportunity to refine its arguments. The joint expert statement in Annex 1 provided the basis for the refined line of reasoning and should thus be admitted.

Claim 4

Claim 4 required the coating weight of layer A as converted to oxygen to be within a certain range. This was an unusual parameter.

It was not clear how the conversion to oxygen could be established or how it could be measured.

The nature of the oxides was not known. Layer A contained different types of oxides from different production steps, i.e. from the primary recrystallisation annealing and from the annealing separator. A conversion to oxygen would require assumptions as to the type and amount of the oxides because both parameters could not be measured. Moreover, it was not possible to selectively remove the oxide layer because a pickling agent, which removed the oxide layer but left the base metal unaffected, was not known.

V. The patent proprietor's key arguments are summarised below:

Article 100(b) EPC

Inconsistent examples

The examples did not show inconsistent results. Paragraph [0048] of the description stated that the coating weight of layer B, the glass layer, was varied. The variation in the results originated from the varying of the coating weight of layer B. The qualitative causal relationship between the coating weight and the resulting tensile stress formed part of the skilled person's common general knowledge, and finding suitable values for adjusting the coating weight was an ordinary task that could be conducted without undue burden.

Respondent's failure to provide evidence

It was a prerequisite that the opponent presented verifiable facts to refute sufficiency of disclosure.

There was, however, no evidence provided during the opposition proceedings in support of the respondent's assertions.

Burden of proof

T 585/92, referred to by the respondent, was an isolated decision which had to be assessed in view of the underlying case. In the case at issue, the burden of proof did not shift to the proprietor since the patent had been erroneously revoked.

Admission of the respondent's last submission

The respondent filed Annex 1 after the summons to oral proceedings and notification of the board's

preliminary opinion, with the intention of overcoming the lack of evidence. However, evidence should have been provided during the opposition proceedings or at least in the reply to the appeal. The expert statement cited two scientific articles, a dissertation and in-house experiments. These were not made available to the appellant, and so there was no possibility to assess the respondent's assertions. The submission came as a surprise and changed the respondent's case. Annex 1 and the accompanying letter, which makes reference to it, should not be considered in the appeal proceedings, in line with Article 13(2) RPBA 2020.

Claim 4

The argument that claim 4 contained an unusual parameter had not been raised before and should not be admitted. The same applied to the argument that the metal sheet was interlocked with layer A, the oxide layer, rendering the selective removal of layer A impossible.

Moreover, claim 4 did not contain an unusual parameter. The skilled person was able to suitably select a pickling agent which could selectively remove layer A. It was also possible to determine the oxides contained in layer A. The skilled person thus had the data they needed to determine the coating weight as converted to oxygen.

VI. Requests as to the substance:

- (a) The appellant (patent proprietor) requested that the decision under appeal be set aside and that the

opposition be rejected and, in the alternative, that the patent be maintained based on one of first to fifth auxiliary requests as resubmitted with the statement of grounds of appeal.

The appellant further requested that paragraph [0043] be corrected in line with the original wording of the priority document which allegedly was incorrectly translated.

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

Reasons for the Decision

1. Sufficiency of disclosure, Article 100(b) EPC

1.1 Burden of proof

With reference to [T 585/92](#), Reasons 3.2, the respondent argued that the appellant bore the burden to prove that the patent was sufficiently disclosed because the opposition division had revoked the patent. The appellant contests that the respondent successfully discharged its initial burden of proof.

On the basis of an in-depth analysis of the relevant case law, the board has concluded that the burden of proof regarding the facts, arguments and evidence on the substance (which initially lies with the opponent) does not shift to the proprietor just because the patent has been revoked due to an alleged insufficient disclosure.

1.1.1 Principles

Only if there are serious doubts, substantiated by verifiable facts, may an application (or a patent) be objected to for insufficient disclosure ([T 19/90](#), Reasons 3.3).

If a material fact is not or cannot be proven, a decision is taken on the basis of who bears the relevant burden of proof. The fact that the real position cannot be established is to the detriment of the party which bears the burden of proof for this fact, among other things because the other party is given the benefit of the doubt. In principle, each party bears the burden of proof for the facts it alleges ([T 63/06](#), Reasons 3.1 and 3.2).

1.1.2 Presumption of validity - rebuttal of the presumption

After the grant of the patent, i.e. after the end of the examination proceedings, a legal presumption exists that the patent meets the requirements of the EPC. In an opposition based on the ground of Article 100(b) EPC, it is the opponent who initially bears the burden to prove that the patent does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a skilled person. However, this presumption can be rebutted. The weight of the submissions required to rebut the presumption depends on its strength. A strong presumption requires more substantial submissions than a weak one. In the context of the ground of opposition of sufficiency of disclosure, the strength depends on the way the invention is disclosed in the patent ([T 63/06](#), Reasons 3.2.1 and 3.3.1; [T 55/18](#), Reasons 1.2).

1.1.3 Discharge of the burden of proof

Thus, the initial burden on the opponent to provide facts, arguments and evidence for an assertion of an insufficient disclosure (in the following: "burden of proof on the substance") may shift to the patent proprietor once the opponent has successfully discharged its burden of proof by submitting sufficient facts, arguments and evidence to rebut the presumption of sufficiency resulting from the information contained in the patent specification

([T 338/10](#), Reasons 12; [T 2218/16](#), Reasons 32.2).

However, this shift can only be caused by sufficient submissions on the substance; formal reasons alone, like the mere existence of the opposition division's decision to revoke the patent, do not lead to a shift of the burden of proof on the substance. If the reasoning in the impugned decision as such is found to be wrong, there cannot be any shift of the burden of proof on the substance ([T 499/00](#), Reasons 1.10; [T 1608/13](#), Reasons 3.1).

Otherwise, a decision revoking a patent on the wrong assumption that it is initially down to the patent proprietor to prove sufficiency could only be set aside if the patent proprietor in fact provided evidence to that effect.

1.1.4 Burden to substantiate a case in opposition and in appeal proceedings

Linked to the burden of proof is the "burden to substantiate a case" (Rule 76(2)(c) EPC in opposition proceedings; Rule 99(2) EPC and Article 12(3) RPBA in appeal proceedings). Thus, the opponent first has to provide facts and argue why these facts support the

assertion that a skilled reader of the patent using their common general knowledge would be unable to carry out the invention ([T 182/89](#), Reasons 2).

This burden to substantiate facts and arguments is then followed by the burden to prove these facts, which is normally done by submitting evidence. Only in the exceptional case of a weak presumption of validity due to a lack of information in the patent may the submission of plausible arguments alone be sufficient (see [T 63/06](#), Reasons 3.3.2; [T 1558/11](#), Reasons 2.7.1).

Often both aspects are together referred to as the burden of proof. This might have led to the misconception that any decision finding insufficiency would lead to the burden of proof being shifted to the patent proprietor.

However, when distinguishing the "burden to substantiate a case" from the "burden of proof on the substance" it can be clearly deduced from the case law that after a decision by the opposition division allowing an objection of insufficiency, it is down to the patent proprietor to substantiate on appeal why that decision is wrong. The burden of proof on the substance (and in consequence the benefit of the doubt), however, is only shifted when the opposition division's assessment that the presented facts, arguments and evidence were sufficient to discharge the opponent's burden of proof turns out to be correct.

Under Article 12(3) RPBA, the statement of grounds of appeal has to set out clearly and concisely the reasons for setting aside the decision under appeal. The appellant (in this case the patent proprietor) therefore bears the burden to substantiate the appeal.

Yet an appeal case need not necessarily be substantiated by submitting facts and evidence that counter the arguments and evidence presented by the opponent. It may also be substantiated by submitting why the opposition division's reasoning on insufficiency was flawed and why the burden of proof on the substance still lies with the opponent.

1.1.5 The case law

[T 1911/17](#), Reasons 24, sets out that the burden to substantiate the appeal must be distinguished from the burden of proof on the substance. The fact that the decision under appeal may be wrong for reasons other than a misjudgement on the substance can be deduced from e.g. decision [T 942/18](#) (Reasons 2.2 to 3.6), [T 55/18](#) (Reasons 1.2 and 2.2) or [T 1596/16](#) (Reasons 2.3).

This is also in line with decision [T 585/92](#) referred to by the respondent, which states in Reasons 3.2 that *"once the Opposition Division has decided to revoke the patent, the burden is shifted to the proprietor of the patent to demonstrate on appeal that the reasons for revoking the patent were not justified, i.e. that the Opposition Division's decision was wrong on its merits"*. "Merits" in this context excludes grounds of opposition on which the opposition division's decision has not been based ([G 9/91](#) or [G 10/91](#), Reasons 18).

Thus, [T 585/92](#) merely states that the appellant bears the burden to substantiate the appeal. It does not imply that the decision under appeal reversed the burden of proof on the substance, in which case the only possibility for the patentee to challenge the

decision under appeal would be to prove that the patent was sufficiently disclosed (see also [T 1911/17](#), Reasons 24; [T 1210/05](#), Reasons 2.3.3).

This view is supported by other case law analysed in this context. There is no case known to the board where the burden of proof on the substance was reversed because of the mere existence of the opposition division's decision. In all reviewed cases, the respective boards assessed whether or not the opponents had discharged their burden of proof on the substance independently of the burden to substantiate the appeal:

(a) Successful discharge of the burden of proof on the substance by submitting experimental data

In [T 480/11](#) (Reasons 3.5), [T 1529/17](#) (Reasons 8.10) and [T 518/10](#) (Reasons 7.10.1) the boards were of the opinion that the opponents had discharged their burden of proof on the substance by submitting experimental data.

(b) Successful discharge of the burden of proof on the substance without experimental data

In [T 188/18](#) (Reasons 3.21) the board was of the opinion that the opponent had discharged its burden of proof on the substance not by submitting experimental data but with reasoned arguments (see also [T 66/07](#), Reasons 7; [T 428/21](#), Reasons 1.4; [T 262/11](#), Reasons 3.4; [T 347/15](#), Reasons 2.2.4).

In [T 325/13](#) the board even considered that there was no need for the opponent to provide further evidence because the deficiency was plausible from the cited prior art and the simple physiochemical context (Reasons 2.4.8 and 2.5.8).

[T 30/15](#) implicitly distinguishes between the appellant's (proprietor's) burden to substantiate the appeal and the opponent's burden of proof on the substance. The board concurred with the impugned decision that the patent did not provide guidance for a number of parameters essential for the success of the claimed invention (Reasons 2). The amendment on appeal reduced this number but the appellant failed to substantiate its appeal case with respect to the other parameters. The board considered that the opponent had thus discharged its burden of proof on the substance for the amended claim too, because the deficiency with respect to the other parameters remained unresolved. The board, however, did not admit the proprietor's late submissions to further substantiate the appeal. The same distinction is made in [T 260/19](#), Reasons 4.2 to 4.4 and 6 to 16.

In [T 376/95](#), the board evidently concurred with the impugned decision, referred to [T 595/92](#) and stated that the patentee had failed to demonstrate that the contested decision was deficient as to its substance (Reasons 2.8). However, the appellant chose to challenge the impugned decision on the substance only. It did not raise the question of whether or not the opponent had discharged its burden of proof on the substance (see T 376/95, point V.).

This is different from the case at issue, in which the appellant is arguing that the opponent did not discharge its burden of proof on the substance.

- (c) Reasons other than a misjudgement on the substance
An appeal against a revocation of a patent for insufficient disclosure need not be based on the

submissions of counter-evidence by the patent proprietor, as can also be seen in cases where the opposition division's decision was set aside. In many cases the board based its decision not on new evidence but on other arguments why the impugned decision was erroneous.

In [T 1596/16](#) the board concluded that the opponent had not discharged its burden of proof on the substance. The board held that the patent did provide instructions on how the claimed invention may be carried out and that there was no reason to disregard or doubt them from the outset. The opposition division's decision was therefore not based on serious doubts substantiated by verifiable facts as required by established case law (Reasons 2.2 and 2.3). Appeal cases with the same conclusion are [T 1002/20](#), Reasons 2.4; [T 55/18](#), Reasons 1.2 and 2.2; [T 720/17](#), Reasons 2.1; [T 430/15](#), Reasons 3; [T 355/15](#), Reasons 6.7.2 to 6.7.4; [T 1052/13](#), Reasons 8.10; [T 1746/12](#), Reasons 6.3.2 to 6.5; [T 2006/08](#), Reasons 4; [T 499/00](#), Reasons 1.10.

In [T 942/18](#) the appellant successfully showed that the opposition division's decision had not been sufficiently reasoned within the meaning of Rule 111(2) EPC (Reasons 2.2 to 3.6).

1.1.6 Substantiation of the appeal in the case in hand

In the case at issue, the patent proprietor lodged an appeal against the decision to revoke the patent. In its statement of grounds of appeal it set out in detail the reasons for setting aside the decision under appeal. There is thus no doubt that the appellant has

substantiated its appeal.

1.1.7 Discharge of the burden of proof on the substance in the case in hand

The case at issue is similar to [T 1596/16](#) (see above). It is disputed whether or not the guidance given in the patent is sufficient for producing the clad material and whether or not the parameters characterising layer A according to claim 4 can be established. Simple physiochemical considerations, like in case [T 325/13](#) referred to above, cannot resolve this dispute.

The decision under appeal revoked the patent because in the opposition division's view, the patent did not sufficiently disclose the claimed subject-matter. The examples were contradictory and there was no guidance in the patent as to which parameter to adjust in order to obtain the desired coating weight for layers A and B and the tension ratio.

The appellant emphasises that there was guidance in the patent in suit and, among other things, challenges the existence of verifiable facts which could substantiate serious doubts that the patent in suit can be carried out.

As apparent from the points 1.3.1 to 1.3.3 below, the description of the patent does provide guidance. There is no reason to disregard or doubt it from the outset. The respondent did not submit evidence to prove that the guidance disclosed in the patent was insufficient for carrying out the invention ([T 1596/16](#), Reasons 2.2 and 2.3).

The opposition division thus could not base its

decision on verifiable facts as required by established case law. Sufficiency of disclosure therefore cannot be denied (Case Law Book, 10th ed., Chapter II.C.9; [T 499/00](#), Reasons 1.10; [T 2006/08](#), Reasons 4, [T 1002/20](#), Reasons 2.4).

The respondent argued that the coating weight for layer A as defined in claim 4 was an unusual parameter or was not able to be measured.

There is no indication that these aspects were raised in the opposition proceedings. The decision under appeal consequently does not cover them.

Irrespective of the admission of these arguments under Article 12(6) RPBA, the respondent did not show that the parameter for defining layer A in claim 4 was an unusual parameter or not able to be measured (see points 1.3.9 and 1.3.10 below).

The respondent therefore did not provide the evidence required for substantiating serious doubts; it did not discharge its burden of proof on the substance.

1.2 Admission of the respondent's last submission

The joint expert declaration of Annex 1 contains images from scientific documents which are not part of the proceedings, along with in-house experiments. The accompanying letter partly refers to Annex 1 and partly repeats arguments already contained in the reply to the appeal.

Under Article 13(2) RPBA 2020, an amendment to the party's appeal case made after notification of a summons to oral proceedings is in principle not taken

into account unless there are exceptional circumstances justified by cogent reasons.

Annex 1 cannot be regarded as a mere refinement of the arguments on file, precisely because the documents cited in that annex cannot be considered to represent the skilled person's general technical knowledge. Annex 1 was filed as a reaction to the board's preliminary opinion questioning the existence of verifiable facts.

Annex 1 must therefore be regarded as the respondent's first attempt to provide evidence in support of its arguments.

However, a board agreeing with the other party's arguments does not amount to exceptional circumstances; this may happen and has to be expected in any inter partes proceedings. Therefore, this evidence should have been filed in the opposition proceedings or at the latest with the reply to the appeal.

Consequently, the joint expert declaration in Annex 1 is not considered in the appeal proceedings. The same applies to the accompanying letter in so far as it relies on Annex 1.

1.3 Sufficient disclosure of the patent in suit,
Article 100(b) EPC

1.3.1 Paragraph [0003] of the patent in suit relates to the technical field. It discloses that the patent is about grain-oriented electrical steel sheets with two coating layers, namely one coating layer mainly composed of an oxide (layer A) and one coating layer mainly composed of phosphate-system glass (layer B). It goes on to describe that the tensile stress applied to the steel sheet by these layers originates from their lower

thermal expansion coefficients as compared with steel. Since the layers are applied to the steel sheet at high temperatures, the steel sheet contracts more than the oxide and glass layers when cooling to room temperature. This mechanism creates a residual tensile stress in the steel sheet.

This fact is undisputed.

1.3.2 From this disclosure, it is immediately apparent that a thicker coating, i.e. a higher coating weight, exhibits a stronger tensile force in the steel sheet than a thinner coating, i.e. a lower coating weight.

1.3.3 The opposition division essentially concluded that the examples were contradictory and there was no teaching in the patent as to which parameter to adjust in order to obtain the desired coating weight for layers A and B and the tension ratio.

However, paragraphs [0047] and [0048] disclose that the primary annealing time and the amount of the aqueous slurry of the annealing separator both have an influence on the coating weight of layer A. The influence of the annealing time can be derived from the numerous examples. The thickness of layer A must be within a certain range (see claim 4 and paragraphs [0016] and [0029]).

Paragraph [0048] indicates that the tension imparted on the steel sheet by layer B is varied by changing the coating weight.

Moreover, layer B must satisfy a certain relationship with respect to layer A, this relationship being a range for the ratio of the tensions imparted by each

layer on the steel sheet. It determines the allowable coating weight of layer B. A disclosure of a range for the coating weight of layer B is thus not required.

The skilled person is therefore taught that a higher coating weight imparts a higher tensile force on the steel sheet having that layer, and vice versa. The skilled person also receives guidance as to which parameters to adjust to obtain a higher or lower coating weight of each layer.

In view of paragraph [0048] of the patent in suit, the allegedly different results of the samples shown in the examples do not appear to be random; they are the consequence of the selected coating weight of the layers.

There is no evidence on file showing that the guidance provided in the patent is insufficient, e.g. because identical coatings in terms of manufacture and thickness imparted substantially different tensions on the steel sheet.

- 1.3.4 The respondent argued that it was not clear whether or not the glass layer was defined in terms of a normal coating weight or in terms of a coating weight "*when converted to oxygen*".

The coating weight of layer A, the oxide layer, is not defined in claim 1. Only dependent claim 4 states that it is within a certain range. Layer B, the glass layer, must satisfy a certain relationship with respect to layer A, namely a ratio of the tension imparted on the steel sheet by each layer.

It is not apparent that the unit for determining the

coating weight or the oxygen equivalent of layer B are relevant for the question of sufficiency of disclosure. The skilled person can use any convenient measure or process parameter that allows them to determine the amount of glass applied to layer A. The patent in suit suggests that after a sample is manufactured, the skilled person can measure the tensile forces imparted by each layer and adapt the manufacturing process accordingly.

No proof to the contrary was provided.

- 1.3.5 The respondent argued that the coating weight was defined prior to the formation of the forsterite layer but the tension was determined afterwards, so the tension imparted by the oxide layer on the steel sheet and the coating weight were determined at different process steps.

There is no evidence that characterising a layer at different steps of the manufacturing process with a different metric could render the subject-matter of claim 1 insufficiently disclosed.

- 1.3.6 The respondent argued that it was known that different heating rates led to different oxides and thus to different layer weights when converted to oxygen, and therefore to different tension imparted on the steel sheet. Consequently, the subject-matter of claim 1 lacked essential features.

There is no evidence supporting this argument. Moreover, according to the respondent, this effect forms part of the common general knowledge. It is thus not surprising for the skilled person, who would consider this effect when designing the manufacturing

process.

- 1.3.7 The respondent argued that the features relating to "*when converted to oxygen*" were so unclear that the question of sufficiency arose.

Claim 4 and paragraph [0029] of the patent in suit indicate the coating weight of the oxide layer in terms of "*when converted to oxygen*".

There is no evidence on file that a skilled person would not understand the term "*when converted to oxygen*". In the field of glass technology the terms "*oxygen equivalent*" or "*converted to the oxygen equivalent*" are used to characterise mixtures of oxides. Since the patent in suit uses the term "*when converted to oxygen*" in the context of a glass or an oxide coating, the skilled person can readily understand this feature.

- 1.3.8 The respondent argued that it was not clear how to produce a layer mainly composed of a specific oxide such as forsterite, as required in paragraph [0003] of the patent in suit. Paragraph [0028] obviously disregarded the oxides formed during primary annealing. Paragraph [0048] disclosed applying an annealing separator containing 10 parts TiO_2 and 100 parts MgO . Forsterite did not contain titanium, yet the TiO_2 in the annealing separator cannot disappear once applied to the surface. It was not clear whether the TiO_2 had to be considered or not.

Paragraph [0026] of the patent in suit indicates how to produce a layer mainly composed of forsterite. There is no evidence available that this, or other layers of the same kind such as those mainly composed of cordierite,

could not be produced. Nor is there any evidence available showing that the presence of a minor quantity of other oxides rendered the patent insufficiently disclosed.

The oxide layer in the example, which includes paragraph [0048], also contains TiO_2 . Since the coating weight of layer A must be converted to oxygen, mixtures of oxides can be covered by this parameter.

- 1.3.9 The parties disagree as to whether or not there existed pickling agents for selectively removing the oxide layer. Neither provided evidence to support their respective assertions.

Since the parties make contradictory but unsubstantiated assertions concerning facts, the patent proprietor is given the benefit of the doubt (T 72/04, Reasons 3).

Even if some pickling of the metal base was inevitable, the consequences of that pickling are not clear. It is not apparent that in this case the uncertainty of whether or not the coating weight measurement was limited to the boundaries of the range contained in claim 4. It is equally unclear whether it had an impact on the tension ratio according to claim 1 and, if it did, whether or not the impact was limited to the boundaries of the claimed range.

There is no available evidence to clarify these aspects.

- 1.3.10 The respondent argued that the interlocked structures of the steel sheet and the oxide layer prevented the selective removal of the oxide layer.

Irrespective of whether this argument is admissible,

there is no evidence that the interlocked structures prevented the selective removal of the oxide layer when using appropriate pickling agents.

Even if some oxides could not be removed, the related consequences are unclear. Specifically, it is not clear whether or not the resulting uncertainty is limited to the boundaries of the claimed ranges in claims 1 and 4. There is no available evidence to clarify these aspects.

- 1.3.11 The respondent argued that the heating rates in paragraphs [0042] and [0043] were contradictory.

According to the appellant, there was an error in the translation of the original application.

In the absence of a certified translation, it could not be verified whether the proposed translation corresponded to the original application. It does, however, not call the sufficiency of disclosure into question.

- 1.4 In the absence of verifiable facts and with the patent proprietor being given the benefit of the doubt, it cannot be denied that the patent was sufficiently disclosed.

2. Remittal

The ground of opposition under Article 100(b) EPC was the only ground covered in the decision under appeal. Further grounds, in particular under Article 100(a) EPC, were not addressed.

Therefore, there is nothing which could be reviewed as per Article 12(2) RPBA 2020, which stipulates that the primary object of the appeal proceedings is to review

the decision under appeal in a judicial manner.
Dealing with a ground of appeal for the first time on appeal would run counter to this objective because that ground was not covered by the decision under appeal (see [T 1487/18](#), Reasons 4).

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:



C. Vodz

E. Bendl

Decision electronically authenticated