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Datasheet for the decision of 26 June 2025

Case Number: T 0580/24 - 3.3.05

Application Number: 18876175.3

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Language of the proceedings: EN

Title of invention:
HOT-PRESSED STEEL SHEET MEMBER AND METHOD FOR PRODUCING SAME

Patent Proprietor:
JFE Steel Corporation

Opponent:
ArcelorMittal

Headword:
Steel Sheet Member/JFE

Relevant legal provisions:
EPC Art. 54, 56, 83, 123(2)
RPBA 2020 Art. 12(6), 13(2)

Keyword:
Amendments - extension beyond the content of the application as filed (no)
Sufficiency of disclosure - fresh ground - admitted (no)
Novelty - main request (yes)
Late-filed facts and evidence - should have been submitted in first-instance proceedings (yes) - admitted (no)
Inventive step - main request (yes)

Decisions cited:
G 0009/91, G 0010/91, G 0007/93, T 0199/00, T 0210/05, T 0021/10

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 0580/24 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 26 June 2025

Appellant: (Opponent)	ArcelorMittal 24-26, Boulevard d'Avranches 1160 Luxembourg (LU)
Representative:	Lavoix 2, place d'Estienne d'Orves 75441 Paris Cedex 09 (FR)
Respondent: (Patent Proprietor)	JFE Steel Corporation 2-3, Uchisaiwai-cho 2-chome Chiyoda-ku Tokyo 100-0011 (JP)
Representative:	Haseltine Lake Kempner LLP Bürkleinstrasse 10 80538 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 21 February 2024 rejecting the opposition filed against European patent No. 3680359 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	P. Guntz
Members:	T. Burkhardt
	S. Besselmann

Summary of Facts and Submissions

I. The opponent's (appellant's) appeal is against the opposition division's decision to reject the opposition to European patent No. 3680359 B1.

II. Of the documents discussed at the opposition stage, the following are relevant to the present decision.

D1	JP 2014-118613 A
D1a	machine translation of D1
D1b	translation of the tables of D1
D2	Y. Nagataki et al., "Effect of Tempering Temperature on the Bendability of Martensitic Steels", Tetsu-to-Hagané, Vol. 99(3), 2013, 71-79
D2a	machine translation of D2
D3	H. Mohrbacher, "Martensitic Automotive Steel Sheet - Fundamentals and Metallurgical Optimization Strategies", Advanced Materials Research, Vol. 1063, 2015, 130-42
D4	JP 2013-122076 A
D4a	machine translation of D4
D5	WO 2017/068756 A1
D5a	EP 3 366 797 A1 (European patent application based on D5)
D6	WO 2016/016707 A1
D7	CN 106399837 A
D7a	machine translation of D7

D8 G. Krauss, "Quench and Tempered Martensitic Steels: Microstructures and Performance", Chapter 12.11 in "Comprehensive Materials Processing", Vol. 12, 2014, 363-378

D9 WO 2017/111456 A1

D9a EP 3 395 994 A1 (European patent application based on D9)

D12 JP 2011-202205 A

D12a machine translation of D12

D13 T.J. Taylor, "New Generation Advanced High Strength Steels for Automotive Hot Stamping Technologies", PhD thesis, Swansea University, 2014

D14 H. Järvinen et al., "Effect of paint baking treatment on the properties of press hardened boron steels", Journal of Materials Processing Technology, Vol. 252, 2018, available online on 11 September 2017, 90-104

D15 P. Dietsch et al., "Predictive Approach for Crash Performance of Press Hardened Steels and its Application on New Product Developments", 6th International Conference on Hot Sheet Metal Forming of High-Performance Steel, 4-7 June 2017, Atlanta

D16 P. Larour et al., "Side Impact Crash Behavior of Press-Hardened Steels - Correlation with Mechanical Properties", 5th International Conference on Hot Sheet Metal Forming of High-Performance Steel, 31 May - 3 June 2015, Toronto

D17 JP 2013-40390 A

D17a machine translation of D17

III. The independent claims of the main request (granted version) read as follows.

"1. A hot-pressed steel sheet member, comprising:
a chemical composition containing, in mass%,
C: 0.30 % or more and less than 0.50 %,
Si: 0.01 % or more and 2.0 % or less,
Mn: 0.5 % or more and 3.5 % or less,
Nb: 0.003% or more and 0.03% or less,
P: 0.05 % or less,
S: 0.01 % or less,
Al: 0.01 % or more and 1.00 % or less,
N: 0.01 % or less, and
optionally at least one selected from the group consisting of
Mo: 0.35 % or less,
Cr: 0.35 % or less,
Ti: 0.15 % or less,
B: 0.0050 % or less,
Ca: 0.005 % or less,
V: 0.05 % or less,
Cu: 0.50 % or less,
Ni: 0.50 % or less,
Sn: 0.50 % or less,
Zn: 0.10 % or less,
Co: 0.10 % or less,
Zr: 0.10 % or less,
Ta: 0.10 % or less, and
W: 0.10 % or less,
with the balance being Fe and inevitable impurities,
where a ratio of a C content in mass% to a Nb content in mass%, C/Nb, is from 22 to 100;
a microstructure in which an average grain size of prior austenite grains is 8 μm or less, a volume fraction of martensite is 90 % or more, and a solute C content is 25 % or less of a total C content; and

a tensile strength of 1780 MPa or more, the tensile strength being measured by a tensile test in accordance with JIS Z 2241."

"3. A method for producing the hot-pressed steel sheet member according to claim 1, comprising:
heating a cold-rolled steel sheet to a heating temperature of Ac3 transformation temperature or higher and 1000°C or lower, the cold-rolled steel sheet comprising a chemical composition containing, in mass%,
C: 0.30 % or more and less than 0.50 %,
Si: 0.01 % or more and 2.0 % or less,
Mn: 0.5 % or more and 3.5 % or less,
Nb: 0.003% or more and 0.03% or less,
P: 0.05 % or less,
S: 0.01 % or less,
Al: 0.01 % or more and 1.00 % or less,
N: 0.01 % or less, and
optionally at least one selected from the group consisting of
Mo: 0.35 % or less,
Cr: 0.35 % or less,
Ti: 0.15 % or less,
B: 0.0050 % or less,
Ca: 0.005 % or less,
V: 0.05 % or less,
Cu: 0.50 % or less,
Ni: 0.50 % or less,
Sn: 0.50 % or less,
Zn: 0.10 % or less,
Co: 0.10 % or less,
Zr: 0.10 % or less,
Ta: 0.10 % or less, and
W: 0.10 % or less,
with the balance being Fe and inevitable impurities,
where a ratio of a C content in mass% to a Nb content

in mass%, C/Nb, is from 22 to 100; and the Ac3 transformation temperature is defined according to the formula in the description;
hot pressing the heated cold-rolled steel sheet to obtain a hot-pressed steel sheet;
cooling the hot-pressed steel sheet to Mf point or lower; and
subjecting the cooled hot-pressed steel sheet to heat treatment under a set of conditions including a heating temperature of 50 °C to 300 °C and a holding time of 5 seconds to 3600 seconds."

Dependent claim 2 relates to a preferred embodiment.

In the following, the last feature of claim 3, i.e. "subjecting the cooled hot-pressed steel sheet to heat treatment ...", will be called "subsequent heat treatment".

IV. With its grounds of appeal, the appellant further submitted, amongst other documents, the following.

D18 Cataphorèse, Techniques de l'Ingénieur M1503 V2, 10 mars 2000

D19 Caisse en blanc, Wikipedia, 25 February 2012

V. The appellant's arguments put forward during the appeal proceedings, where relevant to the present decision, can be summarised as follows.

The opposition division's decision not to consider documents D13 to D17 should be reversed.

The line of argument relating to cataphoresis and documents D18 and D19 should be admitted.

The main request did not meet the requirements of Article 123(2) EPC.

The new grounds for opposition under Article 100(b) EPC in combination with Article 83 EPC should be considered. The main request did not meet the requirements of Article 83 EPC.

Example x-1 of D1/D1a anticipated the subject-matter of the independent claims of the main request.

Moreover, the subject-matter of the independent claims of the main request lacked inventive step over:
- D1 alone
- D1 or D4 in combination with the alleged common general knowledge as illustrated by each of D3, D5, D6, D7, D13, D14, D18 and D19
- D1 in combination with D2, D8, D9, D12, D15, D16 or D17
- D4 in combination with D2, D8, D9, D12, D15, D16 or D17

VI. At the oral proceedings at the appeal stage, the appellant argued that the improved performance in inventive Example 2 of the patent in suit over comparative Example 17 was caused by different average grain sizes of prior austenite grains, rather than by the presence of the subsequent heat treatment.

VII. The patent proprietor's (respondent's) arguments at the appeal stage are reflected in the Reasons below.

VIII. Requests

The appellant requested that the decision be set aside and the patent revoked.

The respondent requested that the appeal be dismissed. In the alternative, the respondent requested that the patent be maintained in amended form on the basis of one of auxiliary requests 1 to 15 submitted with the reply to the grounds of appeal.

Reasons for the Decision

1. Admission of line of argument and new documents

1.1 Documents **D13 to D16**

The appellant requests that the opposition division's decision not to consider documents D13 to D16 be reversed.

However, the opposition division considered that these documents were not *prima facie* relevant, as they did not disclose more information than the documents then on file on a link between the subsequent heat treatment, on the one hand, and increased bending collapsibility and comparable/increased tensile strength, on the other hand.

The appellant has not put forward any evidence that the opposition division had not exercised its discretion in accordance with the correct principles, or that it had exercised it in an unreasonable way, and had thus exceeded the proper limits of its discretion (G 7/93, Reasons 2.6).

Consequently, these documents are disregarded in the present proceedings (Article 12(6) RPBA).

1.2 Document **D17**

For the reasons set out below (see point 5.3.7), the question of whether D17 is cited in the patent in suit as the closest prior art and is necessary for an understanding of the technical problem, and whether it has therefore to be considered, can be left open.

1.3 Line of argument asserting an imperative treatment by cataphoresis and documents **D18** and **D19**

With its grounds of appeal, the appellant argued for the first time that the high-strength, hot-pressed steel-sheet member x-1 of D1/D1a (see also D1b) *necessarily* underwent a cataphoresis treatment if the member was intended for use in an automobile, i.e. as a structural member of the automobile body. This inevitably involved the subsequent heat treatment of claim 3. To corroborate this, the appellant relied on newly submitted documents D18 and D19.

In the appellant's view, this new line of argument was a response to the oral proceedings at the opposition stage, in which the opposition division changed its opinion with regard to inventive step, coming to the conclusion that not all hot-pressed, high-strength steel members for use in automobiles necessarily underwent a paint baking/tempering treatment. Moreover, this line of argument was linked to a previously raised argument regarding paint baking/tempering treatments.

This is not convincing. Cataphoresis was never mentioned at the opposition stage. Cataphoresis relates

to a specific anti-corrosion treatment, whereas paint baking relates to a treatment improving the durability of a paint layer, and tempering to a treatment for improving certain mechanical properties of steel. Consequently, cataphoresis on the one hand and paint baking/tempering on the other hand relate to different aspects of steel-making. While paint baking/tempering may be part of a cataphoresis process, paint baking/tempering is not limited thereto. The general term paint baking does not necessarily concern the particular process of cataphoresis. For these reasons, the argument relating to cataphoresis is not merely a corroboration of the arguments relating to paint baking or tempering that were discussed at the opposition stage.

Furthermore, while the opposition division had indeed come to the provisional opinion that the claimed subsequent heat treatment was obvious (communication accompanying the opposition division's summons to oral proceedings, point 11.6), it is not the case that this was because paint baking or tempering had been considered *inevitable*.

Moreover, in its reply to the summons to the oral proceedings at the opposition stage, i.e. already three-and-a-half months before the oral proceedings, the patent proprietor (now the respondent) had argued that the skilled person would not add the paint baking/tempering of D2, D8, D19 or D12 to Example x-1 of D1, and would thus not arrive at the subsequent heat treatment of claim 3 in an obvious manner. The skilled person "would actively avoid *needless* changes to the manufacturing method for Example x-1 given that changes in manufacturing conditions can have unpredictable

effects on the steel microstructure and properties" (emphasis added by the board).

Consequently, the board can see no reason why the appellant did not already submit the new line of argument and the documents regarding cataphoresis at the opposition stage. These findings are not altered by the fact that D18 and D19 may possibly relate to the common general knowledge.

For these reasons, the line of argument relating to cataphoresis and documents D18 and D19 are disregarded in the appeal proceedings (Article 12(6) RPBA).

Main request

2. Amendments

The appellant argued that the amendments concerning the limits of the Nb content in claims 1 and 3 went beyond the application as originally filed. This objection related to both the values of the Nb concentration limits themselves and the fact that these limits were allegedly disclosed only in combination with the Ti content.

However, this is not convincing.

Paragraph [0014] of the application as originally filed explains the fundamental role of Nb (by way of the ratio C/Nb, which is already present in the independent claims of the application as originally filed). Moreover, an (albeit broader) Nb concentration range is already present in the independent claims of the application as originally filed, and its restriction in

claim 1 is directly and unambiguously derivable from paragraph [0027] of the application as originally filed, which discloses two possible lower and four possible higher Nb concentration limits.

The mere fact that the application as originally filed also describes Ti (besides Nb) as forming carbonitrides and as thereby contributing to strength and bending collapsibility (see paragraphs [0027] and [0036]) cannot prove that the Nb and the Ti concentration ranges have to be modified simultaneously. It is further noted that the discussion of Nb in paragraph [0027] also draws attention to the related costs, this aspect being absent from the discussion relating to Ti. This is a further indication that the concentrations of Ti and Nb are not inextricably linked to each other.

The fact that paragraph [0027] of the application as originally filed is part of the "detailed description" starting in paragraph [0022] and that this section specifies that the Ti concentration has to be 0.10% or less (paragraph [0036]) is merely formal and cannot prove an inextricable link between the Nb and Ti concentration ranges either.

The main request therefore meets the requirements of Article 123(2) EPC.

3. Sufficiency of disclosure

The appellant argued that this point, constituting fresh grounds for opposition, was a response to the allegedly new argument raised by the respondent at the oral proceedings at the opposition stage (and further developed in the decision under appeal) that the

tensile strength of Example x/x-1 of D1 could fall below the claimed range if a paint baking step was added.

However, the minutes (last paragraph of page 4) show that this issue was discussed at the oral proceedings at the opposition stage. The board can see no reason why the appellant did not already raise an objection under Article 83 EPC at that oral proceedings.

Moreover, in appeal proceedings, fresh grounds for opposition may only be considered with the consent of the patent proprietor (G9/91 and G10/91). This is not the case.

Consequently, the objection under Article 100(b) EPC in combination with Article 83 EPC is disregarded.

4. Novelty

The appellant alleged that Example x-1 of D1/D1a (see Table 4), which uses alloy x (see Table 1), taken together with the general disclosure anticipated the subject-matter of the independent claims.

It has not been disputed that the composition of this example falls within the ranges claimed, oxygen being considered an impurity. The martensite fraction of this example is also within the claimed range.

However, as already concluded by the opposition division, Example x-1 of D1/D1a fails at least to disclose the subsequent heat treatment of the cooled hot-pressed steel sheet. While paragraph [0025] of D1/D1a discloses a possible subsequent heat treatment

with overlapping temperature and holding time ranges, Table 4 shows that Example x-1 does not have such a subsequent heat treatment.

An example constitutes a specific embodiment, and cannot be freely combined with other information selected from the description to establish direct and unambiguous disclosure (see T 199/00, Reasons 4.2.1, last two paragraphs; see also T 210/05, Reasons 2.3; T 21/10, Reasons 2.2.1).

Paragraphs [0013] and [0073] of the patent in suit explain that the subsequent heat treatment has an influence on the solute C content.

Consequently, the subject-matter of claims 1 and 3 differs from D1/D1a at least in:
- the subsequent heat treatment of claim 3, and
- the solute C content of claim 1 (and - by back reference - claim 3)

Consequently, the requirements of Article 54 EPC are met.

5. Inventive step

5.1 The appellant raises the following inventive-step objections to the subject-matter of the independent claims:
- D1 alone
- D1 or D4 in combination with the alleged common general knowledge as illustrated by each of D3, D5, D6, D7, D13, D14, D18 and D19 (documents D13, D14, D18 and D19 not being considered; see points 1.1 and 1.3 above)

- D1 in combination with D2, D8, D9, D12, D15, D16 or D17 (documents D15 and D16 not being considered; see point 1.1 above)
- D4 in combination with D2, D8, D9, D12, D15, D16 or D17 (documents D15 and D16 not being considered; see point 1.1 above)

This amounts to a large number of inventive-step objections, and the respondent requests that several of them not be admitted.

However, as none of the inventive-step objections is successful (as already concluded by the opposition division), the question of their admission can be left open - insofar as it is not already addressed under point 1. above.

5.2 The invention relates to a a hot-pressed steel sheet member (claim 1) and to a method for its production (claim 3).

5.3 Method claim 3: D1 as closest prior art

Example x-1 of D1 also relates to a method for producing steel sheets with high strength (paragraph [0018]). As it also has numerous features in common with claim 3 (see point 4. above), it is an appropriate starting point for assessing inventive step.

5.3.1 According to the patent in suit, the problem to be solved is to provide a method resulting in steel sheets with improved bending collapsibility, and with the same or improved tensile strength. Thus, paragraph [0008] of the patent indicates that such steel sheets need to have "excellent bending collapsibility" and "excellent strength".

5.3.2 It is proposed to solve this problem by means of the production method of claim 3, which is characterised by the subsequent heat treatment at a temperature of between 50°C and 300°C and a holding time of between 5 s and 3600 s, carried out after the hot pressing and cooling steps.

5.3.3 For the reasons set out below, there is no reason to doubt that the problem posed has been successfully solved.

Paragraph [0073] of the patent links the distinguishing feature with the desired effects.

While general disclosure of the patent merely indicates that tensile strength remains above 1780 MPa after the subsequent heat treatment (see for example paragraphs [0001], [0011], [0012] and [0015]), a comparison between inventive Example 2 and comparative Example 17 of the patent in suit (see Tables 2 and 3) clearly shows that the claimed subsequent heat treatment does indeed improve both tensile strength and bending collapsibility.

The appellant contests that the technical problem has been successfully solved over the entire breadth of claim 3. It refers to:
- a comparison between Examples 4 and 10, and
- a comparison between Examples 7 and 13

However, these examples are all labelled inventive. For there to be an inventive step, it is not necessary for specific trends to be respected within the protected scope, e.g. for tensile strength to increase with increasing temperature or holding time of the

subsequent heat treatment. Moreover, the appellant's approach, to extrapolate these results to a hypothetical comparative example without the subsequent heat treatment, is speculative.

In this regard, the appellant has failed to provide evidence that the claimed subsequent heat treatment does not result in improved bending collapsibility with the same or improved tensile strength.

5.3.4 The appellant considered that an *increase* in tensile strength due to the subsequent heat treatment - as shown only by inventive Example 2 and comparative Example 17 of the patent in suit - was not credible. The prior art showed that such a subsequent heat treatment rather resulted in a decrease in tensile strength. Moreover, the patent in suit did not give an explanation for this surprising behaviour, in particular as the patent in suit rather taught that a lower dissolved carbon content - which was, according to paragraph [0073], a consequence of the subsequent heat treatment - resulted in a lower tensile strength (paragraph [0043]).

However, the appellant has failed to provide experimental evidence refuting the results of the examples of the patent. There is no need for the respondent to provide a mechanistic explanation for these results, and the possibility cannot be ruled out that other phenomena, e.g. a kind of precipitation hardening at low temperature, increase tensile strength, as argued by the respondent.

5.3.5 At the oral proceedings at the appeal stage, the appellant furthermore argued that the improved tensile strength of inventive Example 2 over comparative

Example 17 was not caused by the subsequent heat treatment but by the different average grain sizes of prior austenite grains of Examples 2 and 17 (Table 3 of the patent).

The appellant did not dispute that the first time it presented this assertion was at the oral proceedings at the appeal stage.

However, the presence of an effect related to the subsequent heat treatment has been in dispute since the first-instance proceedings, and in the absence of exceptional circumstances this new assertion cannot be taken into account (Article 13(2) RPBA).

5.3.6 In summary, there is no reason to doubt that the problem has been successfully solved.

5.3.7 Neither D1 alone nor D1 in combination with any of the numerous documents cited renders the subject-matter of claim 3 obvious.

(a) D1 alone

While D1 itself discloses a subsequent heat treatment in paragraph [0025] (cooling and then reheating between 400°C and 100°C), this paragraph is silent on its purpose. D1 includes values for the heat treatment conditions in Tables 2-4 without further explanation. Even when taking paragraph [0043] of D1/D1a into consideration, as pointed out by the appellant, the purpose of said heat treatment step in terms of its effect on the mechanical properties does not become clear. Said paragraph states that tempered martensite can be formed by slowing down the cooling rate below the Ms point or by forming martensite and then

tempering it at 100 to 600°C, and that in the invention according to D1 the cooling is controlled (i.e. slowed). In any case, there is no suggestion that such a treatment improves tensile strength and/or bending collapsibility. Moreover, the temperature and holding time ranges disclosed in said paragraph [0025] of D1 merely overlap with those of claim 3, so selections from these ranges have to be made.

(b) D1 combined with a tempering/paint baking treatment as allegedly forming part of the common general knowledge (supposedly illustrated by D3, D5, D6 and D7)

First, contrary to the appellant's assertion, none of these documents can prove that all hot-pressed steel sheet members necessarily and inevitably undergo such a tempering/paint baking treatment. The opposition division's view in this regard is correct (points II. 6.6 and II.6.6.1 of the decision under appeal).

Secondly, the skilled person would not contemplate the teaching of the following documents allegedly illustrating the common general knowledge to solve the problem posed when starting from D1.
- **D3** (Figure 10) shows that a tempering treatment in the context of D3 rather results in a decrease in tensile strength.
- While **D5** explains that, *typically*, baking is carried out at 170°C for 20 min (see D5a, paragraph [0088]), the appellant has failed to indicate any hint in D5 that such baking improves bending collapsibility and maintains or improves tensile strength.
- **D6** (page 25 and Table 4) also indicates a paint baking treatment, but without any hint that this improves bending collapsibility and maintains or

improves tensile strength. Nor is there any indication that all high-strength, hot-pressed pieces undergo such a paint baking treatment.
- **D7** (see D7a, paragraph [0031]) indicates that such a subsequent heat treatment rather decreases tensile strength.
- **D13** and **D14** are not considered (see point 1.1 above).

(c) D1 combined with one of D2, D8, D9, D12 and D17

Similarly, none of these documents would be contemplated by the skilled person or yield the claimed subject-matter.
- **D2**: The skilled person, when starting from D1, would not consider tempering when trying to solve the problem posed, since tempering would lead to a decrease in tensile strength (see D2a chapter 4, beginning of the first paragraph on page 87).
- **D8**: A similar reasoning applies to D8. The introduction (page 363) makes it clear that tempering results in a decrease in tensile strength, which is confirmed by Figure 12.
- **D9**: Paragraph [0060] of D9a also indicates that tempering results in a decrease in tensile strength.
- **D12**: This document also indicates that such a subsequent heat treatment results in a decrease in tensile strength ("o" in Table 2 indicating that tensile strength decreases by up to 50 MPa; see paragraph [0061]). Moreover, D12 is silent on bending collapsibility.
- **D17**: The question of its admission notwithstanding, this document discloses in paragraph [0034] that a heat treatment of steels with a C content of 0.3% or more results in reduced strength. In fact, Example x-1 of D1/D1a has a C content of 0.32%, as shown in Table 1.

5.3.8 In the appellant's view, "bending collapsibility" was an unusual parameter, and the formulation of the problem to be solved in this regard was too narrow.

However, even if this part of the problem was formulated in a more general way and the problem to be solved was to provide a method resulting in steel sheets with improved crash behaviour and the same or improved tensile strength, this would not change the reasoning above: none of the cited prior-art documents suggests that the claimed subsequent heat treatment improves crash behaviour and maintains or improves tensile strength.

5.4 Product claim 1: D1 as closest prior art

Paragraphs [0013] and [0073] of the patent in suit link the subsequent heat treatment of claim 3 to the solute C content of claim 1. Inventive Example 2 and comparative Example 17 show that the claimed subsequent heat treatment, and hence the claimed solute C content, result in increased tensile strength and bending collapsibility.

In the appellant's view, the subject-matter of product claim 1 lacks an inventive step, since the features of this claim are the inherent result of the method of claim 3.

Following this logic, the subject-matter of product claim 1 involves an inventive step for the same reasons as the subject-matter of method claim 3 (Article 56 EPC).

5.5 Claims 1 and 3: D4 as closest prior art

The opposition division correctly concluded that D4 is a less promising starting point than D1.

In addition to the absence of a subsequent heat treatment and solute C content (which are distinguishing features in D1), D4 fails to disclose a cold-rolled steel sheet as a starting point or a composition falling under claims 1 and 3 of the patent in suit.

Consequently, D4 cannot render the subject-matter of claims 1 and 3 obvious either (Article 56 EPC).

5.6 Dependent claim

The same reasoning applies to the dependent claim, the subject-matter of which also involves an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Grundner P. Guntz

Decision electronically authenticated