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**Datasheet for the decision  
of 22 November 2019**

**Case Number:** T 0598/17 - 3.3.05

**Application Number:** 11703586.5

**Publication Number:** 2529038

**IPC:** C21D1/26, C21D9/46, C21D9/52,  
C21D6/00, C22C38/04

**Language of the proceedings:** EN

**Title of invention:**

PROCESS FOR THE HEAT TREATMENT OF METAL STRIP MATERIAL, AND  
STRIP MATERIAL PRODUCED IN THAT WAY

**Patent Proprietor:**

Tata Steel Nederland Technology B.V.

**Opponents:**

Voestalpine Stahl GmbH  
ThyssenKrupp Steel Europe AG

**Headword:**

Continuous annealing/TATA

**Relevant legal provisions:**

EPC Art. 54(1), 54(2)  
RPBA Art. 13(1), 13(3)

**Keyword:**

Novelty - main request (no)

Late-filed auxiliary requests - amendments after arrangement  
of oral proceedings - request clearly allowable (no) -  
admitted (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

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Case Number: T 0598/17 - 3.3.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.05**  
**of 22 November 2019**

**Appellant 1:** Voestalpine Stahl GmbH  
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**Appellant 2:** ThyssenKrupp Steel Europe AG  
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**Representative:** Cohausz & Florack  
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**Respondent:** Tata Steel Nederland Technology B.V.  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 4 January 2017  
rejecting the opposition filed against European  
patent No. 2529038 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chairman**            E. Bendl  
**Members:**            A. Haderlein  
                             P. Guntz

## **Summary of Facts and Submissions**

I. The appeals were filed by appellant 1 (opponent 1) and appellant 2 (opponent 2) against the decision of the opposition division to reject the oppositions filed against the patent in suit ("the patent").

II. Claim 1 of the patent as granted reads as follows:

"1. Process for the heat treatment of metal strip material providing mechanical properties that differ over the width of the strip, wherein the strip is heated and cooled and optionally over-aged during a continuous annealing process, characterised in that at least one of the following parameters in the process differs over the width of the strip:

- heating rate
- top temperature
- top temperature holding time
- cooling trajectory after top temperature

or, when over-aging is performed, that at least one of the following parameters in the process differs over the width of the strip:

- heating rate
- top temperature
- top temperature holding time
- cooling trajectory after top temperature
- over-aging temperature
- over-aging temperature holding time
- lowest cooling temperature before over-aging
- re-heating rate to over-aging temperature

and wherein at least one of the cooling trajectories after top temperature follows a non-linear temperature-time path."

III. The opposition division held, *inter alia*, that the subject-matter of claim 1 was novel in view of:

D18: US 5 238 510 A

in particular because D18 did not disclose the recrystallisation over the whole width of the steel strip required by the expression "continuous annealing" used in claim 1.

IV. In the grounds of appeal, appellant 2 submitted that the subject-matter of claim 1 as granted was not new in view of D18. It argued that the expression "annealing" was not confined to recrystallisation but also encompassed any heat treatment resulting in a change of the properties of the treated metal.

V. With its reply to the grounds of appeal, the respondent filed arguments in support of, *inter alia*, novelty of the subject-matter of claim 1 but refrained from filing auxiliary requests.

VI. In a communication under Article 15(1) RPBA, the board informed the parties of its preliminary view according to which the subject-matter of claim 1 lacked novelty.

VII. The parties were summoned to oral proceedings.

VIII. In preparation for the oral proceedings, the respondent filed four auxiliary requests.

IX. At the oral proceedings, the respondent withdrew the previously filed auxiliary requests and filed the fifth to eighth auxiliary requests. The latter requests correspond to those withdrawn with the feature "during a continuous annealing process" of claim 1 as granted

being reintroduced.

- X. In addition to this insertion, the wording of claim 1 of these auxiliary requests, when compared to the wording of claim 1 of the main request, is as follows:

In claim 1 of the fifth auxiliary request ", wherein the strip is a steel strip to produce tailored blanks for the automotive industry," is inserted after "during a continuous annealing process".

Claim 1 of the sixth and seventh auxiliary requests corresponds to claim 1 of the main request including the passage "wherein the strip is a steel strip" and with amendments relating to the "top temperature".

Claim 1 of the eighth auxiliary request corresponds to claim 1 of the fifth auxiliary request wherein the feature "- top temperature" between "- heating rate" and "- top temperature holding time" is deleted and wherein the passage "wherein the steel strip is a steel strip to produce tailored blanks for the automotive industry" is deleted.

- XI. The appellants' arguments, as far as relevant to the present case, may be summarised as follows:

Claim 1 of the patent as granted is not limited to processes where annealing takes place over the whole width of the metal strip. Rather "continuous annealing" also encompasses processes where only parts of a metal strip are annealed in a continuous process.

D18 discloses such a continuous annealing process wherein recrystallisation is performed at the two opposed side edge portions. Thus, the subject-matter of claim 1 was not novel.

The auxiliary requests should not be admitted into the proceedings because they did not *prima facie* overcome the novelty objection raised with respect to the main request. The feature "wherein the strip is a steel strip to produce tailored blanks for the automotive industry" in the fifth auxiliary request was not able to establish novelty over D18, and all requests still encompassed, as a possible alternative, differing heating rates over the width of the strip. This feature was also disclosed in D18.

XII. The respondent's arguments, as far as relevant to the present case, may be summarised as follows:

While it was not contested that the opposing side edges in D18 were recrystallised and thus annealed, no annealing took place in the central portion of the steel strip in D18. However, the expression "continuous annealing" in claim 1 should be understood to mean continuous annealing over the full width of the strip. Thus, the subject-matter of claim 1 was novel.

The subject-matter of claim 1 of the fifth auxiliary request was clearly novel over D18 because the feature "tailored blanks for the automotive industry" excluded steel strips such as those disclosed in D18. While the alternative of a differing heating rate over the width of the strip was present in all auxiliary requests, this feature implied that annealing takes place over the whole width of the strip. No such feature was found in D18.



### XIII. Requests

The appellants requested that the decision under appeal be set aside and that the patent be revoked.

The respondent requested that the appeals be dismissed or, in the alternative, that the patent be maintained in amended form based on one of auxiliary requests 5 to 8 as submitted during the oral proceedings.

### Reasons for the Decision

1. Main request (patent as granted) - novelty
  - 1.1 The parties agree that in D18 the steel strip is annealed at opposing side edges (see column 3, from line 7 onwards). At these side edges, the top temperature is higher than in the central portion. D18 also relates to a continuous process (see Figure 1) which results in mechanical properties, i.e. hardness, that differ over the width of the strip (column 3, from line 21 onwards).
  - 1.2 What is contentious between the parties is whether D18 relates to "continuous annealing". According to the respondent, this feature implies that annealing takes place over the whole width of the strip. However, this argument is not persuasive. This expression only requires that annealing takes place continuously as opposed to a batchwise process. This is clearly the case in D18 (see above). Moreover, normally any treatment of a piece of material called for in a claim will also cover that treatment to be carried out on only a portion of that material unless the wording of the claim explicitly requires the treatment of the

entire piece of material. Therefore, since in D18 annealing takes place at least in the side edges of the steel strip, and claim 1 does not explicitly require the treatment of the entire piece of material, the contentious feature is disclosed in D18.

- 1.3 Therefore, D18 discloses a process as called for in claim 1 wherein the top temperature differs over the width of the strip, i.e. relating to the second alternative of claim 1.
- 1.4 Moreover, D18 also discloses the first alternative of claim 1 as correctly pointed out by the appellants. If the top temperatures are different over the width of the steel strip, the heating rate also differs over the width of the steel strip because a higher top temperature reached in the same amount of time will require a higher heating rate. This is not contested by the respondent who only argues that the differing heating rates result in annealing taking place over the whole width of claim 1. However, this argument must fail because there is nothing in claim 1 which would suggest that heating rates differing over the width of the strip would necessarily result in the strip being annealed over the whole width.
- 1.5 For these reasons, the subject-matter of claim 1 of the main request is not novel (Article 54(1), (2) EPC).
2. Fifth to eighth auxiliary requests - admittance
  - 2.1 In its reply to the grounds of appeal, the respondent had refrained from filing auxiliary requests. It was only after the parties had been summoned and after the board had issued a communication under Article 15(1) RPBA that it filed those requests to which the

present fifth to eighth auxiliary requests essentially correspond. The admittance of the present fifth to eighth auxiliary were therefore in the board's discretion (Article 13(1), (3) RPBA).

- 2.2 According to the respondent, it had refrained from filing auxiliary requests when replying to the grounds of appeal because in the absence of a preliminary opinion by the board, it had not been clear "in which direction the case would develop".

This argument is flawed. It is the respondent's procedural obligation to actively participate in the proceedings and to react to the grounds of appeal by filing appropriate (auxiliary) requests suitable for overcoming the objections raised in the grounds of appeal. In doing so, it is the respondent that determines, to a great extent, "in which direction the appeal case will develop".

- 2.3 Concerning the fifth auxiliary request, the feature "wherein the strip is a steel strip to produce tailored blanks for the automotive industry", according to the respondent, clearly establishes novelty over D18 because this feature excluded steel strips having a full-hard part such as the one disclosed in D18 because such full-hard parts would not be suitable for manufacturing a car.

This argument is not persuasive. Firstly, the expression "to produce tailored blanks for the automotive industry" is rather vague and does not necessarily imply that the steel strip referred to in the claim is actually used for manufacturing a car. Secondly and more importantly, as convincingly argued by the appellants, a car also comprises parts which

have a high degree of hardness. Thus, the respondent has failed to demonstrate that the proposed amendment clearly overcomes the objection of novelty with respect to D18.

3. Concerning the remaining auxiliary requests, these comprise the amendment of the metal strip being a steel strip (sixth and seventh auxiliary requests) and amendments concerning the top temperature (sixth to eighth auxiliary requests).

D18 uncontestedly discloses a steel strip such that the amendment from metal strip to steel strip does not overcome the novelty objection with respect to that document. Moreover, all three auxiliary requests still encompass the alternative of the heating rate differing over the width of the strip, irrespective of the amendments to the top temperature which constitutes another alternative recited in claim 1 of these requests (if present). As D18 also discloses a heating rate differing over the width of the strip (see 1.4 above), amendments to the alternative in claim 1 relating to the top temperature fail to establish novelty over that document.

- 3.1 For these reasons, the board did not admit the fifth to eighth auxiliary requests into the proceedings.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Vodz

E. Bendl

Decision electronically authenticated