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**Datasheet for the decision
of 25 November 2025**

Case Number: T 1616/23 - 3.2.01

Application Number: 16773050.6

Publication Number: 3278917

IPC: B23K11/34, B23K11/11,
B23K11/16, B23K26/36

Language of the proceedings: EN

Title of invention:

METHOD FOR SPOT WELDING OF PLATED STEEL SHEET

Patent Proprietor:

Nippon Steel Corporation

Opponent:

ArcelorMittal

Headword:

Relevant legal provisions:

EPC Art. 123(2)
RPBA 2020 Art. 13(2)

Keyword:

Amendments - extension beyond the content of the application
as filed (yes)

Amendment after summons - exceptional circumstances (no) -
cogent reasons (no) - taken into account (no)

Decisions cited:

G 0002/10

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1616/23 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 25 November 2025

Appellant: ArcelorMittal
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 July 2023 concerning maintenance of the
European Patent No. 3278917 in amended form.

Composition of the Board:

Chairman G. Pricolo
Members: V. Vinci
M. Millet

Summary of Facts and Submissions

- I. The appeal of the appellant (opponent) lies against the decision of the Opposition Division maintaining the European patent No. 3 278 917 in amended form.

In its decision, the Opposition Division found that the patent as amended according to the main request filed on 11 February 2022 met the requirements of Articles 83, 84 and 123(2) EPC, and that the subject-matter of independent method claims 1 and 3 was novel and involved an inventive step within the meaning of Articles 54 and 56 EPC in view of the cited prior art.

- II. With a communication in accordance with Article 15(1) RPBA dated 28 May 2025 the Board informed the parties of its preliminary assessment of the case.

Oral proceedings took place before the Board on 25 November 2025 by videoconference.

- III. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 3 278 917 be revoked.

The respondent (patent proprietor) requested that the appeal of the appellant (opponent) be dismissed (main request) or, in the alternative, that the patent be maintained in amended form on the basis of one of the new auxiliary requests 1 and 2 filed during oral proceedings or of one of the auxiliary requests 1 to 8 or of one of the auxiliary requests 0 and 1A to 8A submitted during the first instance proceedings.

IV. Independent claim 1 of the patent as maintained reads as follows (labelling of the features according to the appealed decision):

1.1 *"A method of spot welding of a stacked plurality of steel sheets (1a,1b),*

1.2 *one or more of the stacked plurality of steel sheets (1 a,1 b) having a welding part coated with galvanized plating, galvannealed plating, hot dip galvanized plating, electrogalvanized plating, zinc-nickel electroplating, or plating of a zinc-aluminum-magnesium system on at least one surface,*

1.3 *the method comprising:*

clamping the stacked plurality of steel sheets (1a,1b) with welding electrodes (10a,10b) facing the steel sheets (1a,1b); and spot welding the stacked plurality of steel sheets (1a, 1b);

and characterized in that

1.4 *the step of clamping the stacked plurality of steel sheets (1a, 1b) with welding electrodes is preceded by a step of removing the plating*

1.5 *from a range at least having in-circle area, an outer edge of the area being an outer periphery of a weld heat affected zone*

1.6 *formed at the surface of the welding electrode side of the stacked plurality of steel sheets (1a, 1b);*

1.7 *wherein the outer periphery of the weld heat affected zone is a position where the steel sheet is*

heated to 700°C during spot welding."

Independent claim 3 of the patent as maintained corresponds to independent claim 1, wherein feature 3.5, corresponding to feature 1.5 above, reads:

3.5 "from an in-circle area, an outer edge of the area being an outer periphery of a broadest weld heat affected zone"

In features 1.5 and 1.7 of independent claim 1, as well as in features 3.5 and 3.7 of independent claim 3 of the new auxiliary request 1, the expression *"outer periphery"* has been replaced by *"scheduled outer periphery"*.

In addition to these amendments, independent claims 1 and 3 of the new auxiliary request 2 further specify, in features 1.3 and 3.3 respectively, that the method comprises a *"test spot welding"*. Moreover, both independent claims recite that the process steps defined in the characterising portion are carried out *"if any occurrence of cracking is confirmed in the test spot welding"*.

Features 1.7 and 3.7 of independent claims 1 and 3 of auxiliary requests 1 to 8, 0 and 1A to 8A, which are relevant for the present decision, are identical to the corresponding features of independent claims 1 and 3 of the patent as maintained by the Opposition Division.

Reasons for the Decision

MAIN REQUEST

Article 123(2) EPC: Amendments

1. Contrary to the findings of the Opposition Division, the patent as maintained does not meet the requirements of Article 123(2) EPC.
- 1.1 In its decision the Opposition Division held that none of the objections raised by the appellant (opponent) under Article 123(2) EPC were well-founded. In particular the Opposition Division took the view that the expression "*during spot welding*" in features 1.7 and 3.7 of independent claims 1 and 3 respectively did not result in subject-matter extending beyond the content of the application as filed. Furthermore, the Opposition Division found that - contrary to the appellant's (opponent's) opinion - the omission of the term "*scheduled*" to qualify the term "*position*" in the same features did not result in any unallowable intermediate generalisation of the embodiments disclosed in paragraph [0056] and Figure 11 of the A1-Publication which indisputably constituted the basis for the introductions of features 1.7 and 3.7 in independent claims 1 and 3 of the patent as maintained.
- 1.2 With their appeal, the appellant (opponent) contested, inter alia, these findings of the department of first instance. They essentially argued that the teaching of paragraph [0056] of the A1-publication should not be read in isolation but rather that its technical content had to be interpreted in view of the teachings of the preceding paragraphs [0053] to [0055] and the subsequent paragraphs [0057] to [0059]. In their

opinion, a correct reading of paragraph [0056] in its technical context led the person skilled in the art to the conclusion that it related to the step of "*confirming cracking*" carried out during "*test spot welding*". Accordingly, although paragraph [0056] did not explicitly mention "*test spot welding*", the skilled person directly and unambiguously understood that the heat affected zone (in the following HAZ) referred to therein was the area in which the sheet was heated to 700 °C during the test spot welding, and not during the subsequent actual spot welding as instead recited in features 1.7 and 3.7 introduced in claims 1 and 3 of the patent as maintained. Regarding the use in features 1.7 and 3.7 of the term "*position*" instead of the expression "*scheduled position*" disclosed in paragraph [0056] of the A1-Publication, the appellant (opponent) argued that the independent claims now covered any form of scheduling including a numerical simulation or computer modelling. However, these methods for determining the position of the HAZ were not disclosed in the application as filed. They put forward that paragraphs [0030] to [0038], [0053] to [0059] as well [0077] of the A1-Publication confirmed that the notion of "*scheduled position*" of the HAZ is inextricably linked to test spot welding which is carried out before the actual spot welding. The omission of the term "*scheduled*" to qualify the position of the isotherm at 700° C thus resulted in an unallowable intermediate generalisation infringing Article 123(2) EPC.

- 1.3 The respondent (patent proprietor) argued that it was crystal clear to the person skilled in the art that the scheduled position of formation of the outer edge of the HAZ of a steel sheet mentioned in paragraph [0056] of the A1-Publication, which did not mention the expression "*test spot welding*", was the position of the

outer edge of the HAZ when the stacked sheets were heated to about 700°C during the actual spot welding step. This also resulted from the technical meaning of the term "*scheduled*" and from the fact that the expression "*scheduled position*" appeared in several passages of the description always in association with the actual spot welding step. Therefore, it was inherent for the person skilled in the art reading claims 1 and 3 in the light of the technical context of the application as filed that the "*position*" recited in features 1.7 and 3.7 was nothing else than the "*scheduled position*" referred to in paragraph [0056] of the A1-Publication as it resulted from the actual spot welding step. In this respect reference was also made to paragraph [0059] and Figure 11 of the A1-Publication. Therefore, the respondent (patent proprietor) concluded that - as stated by both the Examining and Opposition Division and by the Board in its preliminary assessment of the case in the communication pursuant to Rule 15(1) RPBA - no undisclosed information was caused by the introduction of features 1.7 and 3.7 in claims 1 and 3 of the patent as maintained respectively.

- 1.4 The Board cannot follow the reasoning of the Opposition Division and the arguments put forward by the respondent (patent proprietor):

When assessing compliance of an amendment with the requirements of Articles 123(2) EPC the decisive question is whether the skilled person, using common general knowledge and taking the whole technical content of the application as filed, would derive the amended subject-matter directly and unambiguously from the original disclosure (so-called "*Gold Standard*" - G2/10). Any amendment that presents the skilled person

with new technical information, i.e. information that is not directly and unambiguously derivable from the application as filed, contravenes Article 123(2) EPC.

1.5 In the present case, and for the purpose of correctly assessing compliance with the requirements of Article 123(2) EPC, the Board considers it decisive to establish the actual sequence of steps of the method according to the contested patent as disclosed in the originally filed application.

1.6 In accordance with the submissions and the further clarifications provided by the appellant (opponent) during the oral proceedings, and as indeed supported by the description as filed, the method according to the contested patent comprises the following steps which are carried out in the specific sequence indicated below:

- first, two or more of coated steel sheets to be welded are stacked and a test spot welding operation is carried out (see for example paragraphs [0030] to [0033] of the A-Publication);

- subsequently, occurrence of cracking at the welded location is checked for (see paragraphs [0034] and [0035] of the A-Publication);

- if the presence of cracking is confirmed by appropriate investigations the extension of the HAZ is determined (see for example paragraph [0037] of the A-Publication);

- thereafter, should the presence of cracking be confirmed, the plating is removed at least within an in-circle area of the welding portion of two steel

sheets to be welded, the outer edge of said in-circle area corresponding to the outer periphery of the HAZ previously determined;

- finally, the two steel sheets from which the plating has been locally removed are stacked and actual spot welding is carried out.

1.7 This sequence of steps is also confirmed by and fully consistent with the information provided in paragraphs [52] to [59] of the description as originally filed. In particular, paragraph [0059] of the A1-Publication teaches that *"Further, in order to determine the scheduled position of formation of the outer edge of the heat affected zone, Nital or another corrosive liquid may be used to observe the cross-section of the test spot weld zone."* (relevant wording emphasized by the Board). Contrary to the assumption of the respondent (patent proprietor), this passage clearly indicates to the skilled reader that the determination of the *"scheduled position"* of the outer edge of the heat affected zone recited in features 1.5 and 3.5 is carried out during the test spot welding operation and not during the (actual) spot welding operation as instead recited in features 1.7 and 3.7 introduced in independent claims 1 and 3.

1.8 This conclusion is consistent with the underlying principle of the contested patent, namely that - in order to avoid cracking in the weld zone, the plating must be removed from the coated steel sheets within a range defined by the outer periphery of the weld HAZ, i.e. by the 700 °C isotherm, prior to the actual spot welding step. Consequently, according to the application as originally filed, the position of the 700 °C isotherm recited in features 1.7 and 3.7 that is

used to delimit the area from which the plating has to be removed must be determined before performing the actual spot welding operation, i.e. during the preliminary test spot welding operation. However, features 1.7 and 3.7 of independent claims 1 and 3 of the patent as maintained indicate that the outer periphery of the weld heat-affected zone corresponds to the 700 °C isotherm as it results during the (actual) spot welding operation, i.e. after the plating has been removed. This definition of the outer periphery of the HAZ deviates from that disclosed in the application as filed, according to which - as explained above - the relevant 700° C isotherm is the one determined during the test spot welding step, i.e. prior to the removal of the plating. The skilled person, reading claims 1 and 3 of the patent as maintained is thus presented with technical information that is not directly and unambiguously derivable from the original disclosure. It is correct - as pointed out by the respondent (patent proprietor) - that the expression "*scheduled position*" in paragraph [0056] appears in several passages of the A-publication. However, the Board cannot identify in these passages any direct and unambiguous indication that this term and hence the content of paragraph [0056] refer to the position of the 700 °C isotherm during the actual spot welding operation. Regarding Figure 11, which was also relied upon by the respondent (patent proprietor) in support of the allowability of the contested amendments in features 1.7 and 3.7, the Board notes that this figure does not unambiguously relate to the actual spot welding step. On the contrary, since its description refers to the step of "*confirming cracking in spot welding of two-sheet combinations*", the skilled person would understand Figure 11 as depicting the steel sheets during the test spot welding step operation

which is carried out before the actual spot welding operation.

- 1.9 For all these reasons, the Board concludes that, contrary to the finding of the Opposition Division, the subject-matter of claims 1 and 3 of the patent as maintained contains added subject-matter and thus infringes Article 123(2) EPC. Therefore, irrespective of the assessment of the further issues raised by the appellant (opponent), the main request is not allowable.

AUXILIARY REQUESTS 1 to 8, 0 and 1A to 8A

Article 123(2) EPC: Amendments

2. Since features 1.7 and 3.7 of independent claims 1 and 3 of each one of these auxiliary requests are identical to the corresponding features of claims 1 and 3 of the main request, the objection and the reasoning set out above with respect to the main request apply "*mutatis mutandis*". Accordingly, independent claims 1 and 3 of these auxiliary requests do not comply with the requirements of Article 123(2) EPC either.

NEW AUXILIARY REQUEST 1 AND 2

Admissibility

3. Following the announcement at the oral proceedings of the result of the Board's deliberation that the main request did not meet the requirements of Article 123(2) EPC in view of the above-mentioned issues, the respondent (patent proprietor) filed by email new auxiliary requests 1 and 2 and requested that they be

admitted into the appeal proceedings.

3.1 The respondent (patent proprietor) submitted that "*exceptional circumstances*" within the meaning of Article 13(2) RPBA which, in their view, justified the admittance of these auxiliary requests at such a late stage of the proceedings arose from what they considered to be a very surprising and regrettable change in the Board's opinion at the oral proceedings, compared with the preliminary positive assessment of compliance with the requirements of Article 123(2) EPC as set out in the communication pursuant to Article 15(1) RPBA dated 28 May 2025. They put forward that the conclusion of the deliberation of the Board were all the more unexpected in view of the fact that both the Examining Division and the Opposition Division had found that the introduction of features 1.7 and 3.7 in independent claims 1 and 3 did not infringe Article 123(2) EPC and that no new arguments had been submitted by the appellant (opponent), be this in writing or during the oral proceedings. The respondent (patent proprietor) also argued that the amendments introduced in the new auxiliary request 1 consisting in the clarification that the "*position*" referred to in the independent claims was a "*scheduled position*" and in the introduction in the new auxiliary request 2 of the "*test spot welding*" were self-explanatory and directly addressed and solved the issues raised by the Board and the appellant (opponent) without giving rise to any new objection.

3.2 The appellant (opponent) requested to disregard the new auxiliary requests 1 and 2 under Article 13(2) RPBA because in their opinion no exceptional circumstances justified with cogent reasons had been brought forward by the respondent (patent proprietor). In this respect,

it was pointed out that no new line of arguments had been presented at the oral proceedings and that a change in the preliminary opinion of the Board was a procedural non-surprising circumstance that the parties should always take into account in due time.

- 3.3 The Board notes that, according to established case law of the Boards of Appeal, a change of the preliminary opinion issued pursuant to Article 15(1) RPBA does not, in general, amount to an *"exceptional circumstance"* within the meaning of Article 13(2) RPBA. In fact, a preliminary opinion is, by definition, provisional. This is also emphasized in several passages of the Board's communication of 28 May 2025 (see points 2, 2.1, and 10). The parties must therefore always expect that such opinions may be revised following the discussion at oral proceedings, which exist precisely to allow for this possibility.
- 3.4 The respondent (patent proprietor) correctly observed that in certain cases the some boards have considered the revision of the preliminary opinion as an *"exceptional circumstance"* and consequently exercised their discretion under Article 13(2) RPBA in the sense to admit new submissions at a late stage of the appeal proceedings. In those cases, however, the preliminary opinion was reversed in view of new objections or line of arguments introduced for the first time at a late stage of the proceedings. This is not the situation here as also acknowledged by the respondent (patent proprietor) who did not object that new and unexpected lines of arguments had been submitted. The contested revision of the preliminary opinion regarding compliance with the requirements Article 123(2) EPC was merely based on and reflects the same objections and line of arguments already presented by the parties

during the first instance proceedings and with their written submissions in appeal. These lines of arguments were however re-assessed in light of the oral presentation of the case provided by the parties at the oral proceedings.

3.5 In this context the Board notes that even if the arguments presented orally might essentially be the same as those presented in writing, the oral presentation, as in the present case, might help in focusing the discussion on points which impact was previously not assessed to its full extent, for instance by means of clearer explanations. Accordingly, the criticisms of the respondent's (patent proprietor's) representative in respect of the Board deviating from its preliminary opinion even if no new lines of arguments were presented are unfounded, and would be tantamount to say that an oral proceedings would serve no purpose when the parties present orally the same arguments presented in writing. For this reasons, also the allegation of the representative of the respondent (patent proprietor) concerning the fact that in the present circumstances the preliminary opinion of the Board in the communication under Article 15(1) RPBA could only have been written by the rapporteur of the Board alone without participation of the other members of the Board, thus being contrary to what stated in paragraph 2 of the communication, is completely unfounded. In fact, the debates at the oral proceedings require all parties' representatives to carefully listen and carefully reply even in the presence of a positive preliminary opinion of the deciding organ for one of the parties.

3.6 In any case, as pointed out by the appellant (opponent) during oral proceedings, the amendments introduced in

the new first and second auxiliary requests do not overcome the objection of lack of compliance with the requirements of Article 123(2) EPC discussed previously and considered convincing by the Board after deliberation at the oral proceedings, raised in connection with the issue that according to features 1.7 and 3.7 of claims 1 and 3 and contrary to the disclosure of the originally filed application the outer periphery of the weld heat-affected zone corresponds to the 700 °C isotherm as it results during the (actual) spot welding operation. Accordingly, also the requirements of Article 13(1) RPBA would prevent the Board from exercising its discretion in the sense of admitting the new auxiliary requests 1 and 2 into the appeal proceedings.

- 3.7 In view of the above, the Board, exercising its discretion under Article 13(2) RPBA, decided not to admit the new auxiliary requests 1 and 2 into the appeal proceedings.

Order

For these reasons it is decided that:

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

The Registrar:

The Chairman:



D. Grundner

G. Pricolo

Decision electronically authenticated