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Datasheet for the decision of 5 October 2016

Case Number: T 1689/12 - 3.2.07

Application Number: 05756220.9

Publication Number: 1784520

IPC: C23C2/00, C23C2/20, C23C2/24, C23C2/40

Language of the proceedings: EN

Title of invention:
A DEVICE AND A METHOD FOR STABILIZING A METALLIC OBJECT

Patent Proprietor:
ABB AB

Opponent:
EMG Automation GmbH

Headword:

Relevant legal provisions:
EPC Art. 56, 84, 100(c), 123(2), 123(3)
EPC R. 80
RPBA Art. 12(2), 12(4), 13(3)

Keyword:
Main request - could have been maintained in first instance proceedings (yes) (see points 1.2 and 1.4)
Auxiliary request - addition of independent claims to the set of claims maintained in first instance - admissible (yes) - inventive (yes)
Reformatio in peius - maintained claims in a set with other (added) claims cannot be challenged by non-appealing opponent (point 2.2.2)

Decisions cited:
G 0009/91, G 0010/91, G 0001/99, G 0009/92, T 1067/08, T 0856/92, T 1626/11, T 0181/02, T 0610/95, T 0223/97, T 0312/94

Catchword:

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Case Number: T 1689/12 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 5 October 2016

Appellant: (Patent Proprietor)	ABB AB Kopparbergsvägen 2 721 83 Västerås (SE)
Representative:	Zimmermann & Partner Patentanwälte mbB Postfach 330 920 80069 München (DE)
Respondent: (Opponent)	EMG Automation GmbH Industriestrasse 1 57482 Wenden (DE)
Representative:	Klingseisen, Franz Klingseisen, Rings & Partner Patentanwälte Postfach 10 15 61 80089 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 16 May 2012 concerning maintenance of the European Patent No. 1784520 in amended form.**

Composition of the Board:

Chairman	H. Meinders
Members:	G. Patton
	I. Beckedorf

Summary of Facts and Submissions

I. The appellant (patent proprietor) lodged an appeal against the decision to maintain European patent No. 1 784 520 in amended form.

The opposition had been filed against the patent as a whole and was based on Article 100(a) EPC (lack of novelty and lack of inventive step) and Article 100(b) EPC (insufficiency of disclosure).

II. With the statement setting out the grounds of appeal the appellant requested that the decision be set aside and that the patent be maintained according to the main request (patent as granted) or, alternatively, according to one of the first to tenth auxiliary requests, subsidiarily that oral proceedings be held.

The opponent (respondent) requested that the appeal be dismissed, subsidiarily that oral proceedings be held.

III. The following documents of the opposition proceedings are relevant for the present decision:

D1: DE 21 18 010 A1;
D2: EP 1 312 692 A1; and
D3: GB 2 334 351.

IV. The Board provided the parties with its preliminary non-binding opinion annexed to the summons for oral proceedings.

In reaction, the appellant withdrew all its requests on file and filed a new main request and a new auxiliary request with its letter dated 26 August 2016.

Oral proceedings took place on 5 October 2016 during which the following issues, *inter alia*, were discussed with the parties:
- admission into the proceedings of the main request under Article 12(4) RPBA;
- admission into the proceedings of the auxiliary request under Article 12(4) RPBA;
- admissibility of the respondent's objection in respect of the original disclosure of the subject-matter of claim 1 of the auxiliary request under Article 123(2) EPC;
- original disclosure of the subject-matter of claim 2 of the auxiliary request;
- objection to claim 2 of the auxiliary request under Rule 80 EPC;
- inventive step of the subject-matter of claims 2 and 14 of the auxiliary request in view of the disclosure of any of documents D1, D2 or D3 in combination with the common general knowledge of the skilled person.

The present decision was announced at the end of the oral proceedings.

V. The appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of one of the sets of claims filed as main request and auxiliary request with letter of 26 August 2016.

VI. The respondent requested that the appeal be dismissed.

VII. As the main request was not admitted into the proceedings pursuant to Article 12(4) RPBA, it is not necessary to recite the wording of its independent claims 1 and 12.

As claims 1 and 13 of the auxiliary request correspond to claims 1 and 3, respectively, of the patent as maintained by the opposition division, it is not necessary to recite their wording either. In view of the prohibition of *reformatio in peius*, the patent proprietor being the only appellant, these claims cannot be objected to by the Board, nor by the respondent.

Claim 2 of the auxiliary request reads as follows (in bold the amendments with respect to claim 1 of the patent as granted; emphasis in bold added by the Board):

"A device for stabilizing an elongated metallic strip (1) of magnetic material when coating the strip (1) with a metallic layer by continuously transporting the strip through a bath (2) of molten metal, wherein the strip (1) is intended to be transported from the bath (2) in a transport direction (16) along a predetermined transport path (X), whereby the device comprises a wiping device (4) for wiping off superfluous molten metal from the strip (1) by applying an air flow in a line across the transport path (X) of the strip (1) and wherein the line extends over essentially the whole width of the strip, wherein the wiping device (4) comprises at least one pair of air-knives (5, 6) arranged with one air-knife on each side of the strip (1), whereby the device comprises an electromagnetic stabilizing device (7) which is arranged to stabilize the position of the strip (1) with respect to the predetermined transport path (X) and which comprises at least one electromagnetic stabilizing member (8, 9) on each side of the strip (1), and wherein the device comprises a sensor (14, 15) arranged to detect the position of the strip (1) in relation to the

predetermined transport path (X), the electromagnetic stabilizing members (8, 9) are arranged to apply a magnetic force to the strip in dependence on the measured detected position and in a direction substantially perpendicular to the predetermined transport path (X),
characterized in that
the sensor (14, 15) is configured to detect the position of the strip in a region adjoining the line where the air flow from the air-knives hits the strip (1), and that the electromagnetic stabilizing members (8, 9) are arranged adjacent to the air-knives (5, 6) and to apply the magnetic force adjacent to the line where the air flow from the air-knives hits the strip **wherein the air-knife (5, 6) is arranged at a beam for controlling the location of the air-knife, and the stabilizing device is arranged in the beam that holds the air-knife.**"

Claim 14 of the auxiliary request reads as follows (in bold the amendments with respect to claim 12 of the patent as granted; emphasis in bold added by the Board):

"A method for stabilizing an elongated metallic strip (1) of magnetic material when coating the strip (1) with a metallic layer, wherein said layer is applied by continuously transporting the strip through a bath (2) of molten metal, wherein the method comprises the steps of:
- arranging an air-knife at a beam for controlling the location of the air-knife;
- arranging a stabilizing device in the beam that holds the air-knife;

- transporting the metallic strip (1) from the bath (2) in a direction along a predetermined transport path (X),
- wiping off superfluous molten metal from the strip (1) by applying an air flow to the strip and in a line across the transport path (X) of the strip, wherein the line extends over essentially the whole width of the strip, wherein the air flow is generated by a wiping device (4) comprising an air-knife (5, 6) on each side of the strip (1),
- detecting with a sensor (14, 15) the position of the strip (1) with respect to then position of the predetermined transport path (X), and
- stabilizing the position of the strip (1) with respect to the predetermined transport path (X) by applying a stabilizing magnetic force to the strip in response to the detected position of the strip

characterized by that
the position of the strip (1) is detected in a region adjoining the line where the air flow from the air-knives (5, 6) hits the strip (1), and the stabilizing magnetic force to the strip is applied adjacent to the line where the air flow from the air-knives (5,6) hits the strip."

VIII. The appellant argued essentially as follows:

Main request

This request was filed as an auxiliary request during the opposition proceedings. It was withdrawn to increase procedural efficiency and in view of the opposition division's clear indication at the very beginning of the oral proceedings that only a limited number of requests would be discussed.

The request was re-filed as an auxiliary request with the statement setting out the grounds. Its subject-matter is not complex, oral proceedings do not need to be adjourned to deal with it and it does not constitute an abuse of proceedings.

Therefore, the main request should be admitted into the proceedings.

Auxiliary request 1

The subject-matters of claims 2 and 14 of the auxiliary request are comprised in auxiliary requests dealt with in the impugned decision. These subject-matters have hence never been withdrawn and are part of the factual and legal scope of the appeal. That they are not discussed in the impugned decision with respect to certain issues such as novelty and/or inventive step does not change this fact.

The subject-matters of claims 2 and 14 were also part of an auxiliary request filed with the statement setting out the grounds of appeal and were dealt with by the respondent and the Board. Consequently, the auxiliary request cannot raise issues which the Board or the respondent could not reasonably be expected to deal with without adjournment of the oral proceedings.

Therefore, this auxiliary request should be admitted into the proceedings.

Claims 1 and 13 of the auxiliary request correspond to claims 1 and 3 of the patent as maintained by the opposition division. Therefore, in view of the principle of the prohibition of *reformatio in peius*, the patent proprietor being the only appellant, these

claims cannot be challenged in appeal. Hence, the respondent's objection based on Article 123(2) EPC and raised with letter of 30 August 2016 should not be admitted into the proceedings.

Claims 1 and 2 of the auxiliary request concern two distinct embodiments as the relative arrangement of the air-knife and the stabilizing device/members as specified in claim 1 is not included in claim 2. The requirements of Rule 80 EPC are hence fulfilled. This applies *mutatis mutandis* to the method claims 13 and 14.

None of the documents D1, D2 or D3 discloses at least the feature of claim 2 that "the stabilizing device is arranged in the beam that holds the air-knife". Starting from either D1, D2 or D3 as closest prior art, there are many technical effects of this distinguishing feature. The problem to be solved can then be seen as to modify the device of D1 (or D2, or D3) so that the stabilization of the strip is improved. The claimed solution is not known from the available prior art nor does it belong to the skilled person's common general knowledge. The skilled person has firstly to decide to have only a single beam holding both the air-knife and the stabilizing device, and secondly to arrange the stabilizing device in that beam, i.e. having a beam suitable for that purpose. As a consequence, the subject-matter of claim 2 involves inventive step. This applies *mutatis mutandis* to the method claim 14.

IX. The respondent argued essentially as follows:

Main request

The main request should not be admitted in appeal as it was withdrawn during the opposition proceedings.

Auxiliary request 1

It appears from annex 4 of the minutes of the oral proceedings before the opposition division that the appellant unambiguously deleted the subject-matter of the now newly introduced claims 2 and 14 in this auxiliary request. Hence, the subject-matter of the newly introduced independent claims 2 and 14 of the auxiliary request were deliberately withdrawn during the opposition and by virtue of Article 12(4) RPBA cannot be reintroduced in appeal. This is all the more true since their subject-matters did not play a role in the impugned decision. Therefore, the auxiliary request should not be admitted into the proceedings.

Claims 1 and 13 of the auxiliary request do not fulfill the requirements of Article 123(2) EPC. This objection should be admitted into the proceedings and taken into account by the Board as it is there to review the whole decision; only valid patents are to be maintained.

Claim 2 of the auxiliary request is a mere preferred embodiment of claim 1 of the auxiliary request. Claim 2 should therefore be drafted as dependent on claim 1. As a consequence, the requirements of Rule 80 EPC are not fulfilled. This applies *mutatis mutandis* to the method claims 13 and 14.

Each of the documents D1, D2 or D3 could be regarded as the closest prior art for claim 2. The only distinguishing feature of claim 2 over each of D1, D2 or D3 is that "the stabilizing device is arranged in the beam that holds the air-knife". In view of the corresponding technical effect the problem to be solved can be seen as to modify the device of D1 (or D2, or D3) so that the stabilization of the strip is improved. Since the subject-matter of claim 1 of the auxiliary request cannot justify inventive step, the subject-matter of claim 2 of the auxiliary request, which concerns a mere embodiment of said claim 1, cannot justify inventive step either, taking account of the skilled person's common general knowledge. The above mentioned distinguishing feature relates to a mere constructional choice for the non-inventive device of claim 1, i.e. a mere issue of design, which does not require inventive skills. This applies *mutatis mutandis* to the method claim 14.

Reasons for the Decision

1. *Main request*

1.1 The main request corresponds to the former fourth auxiliary request filed with the statement setting out the grounds of appeal. As put forward in the annex to the summons to oral proceedings, point 8.1.1, this auxiliary request corresponds to the then auxiliary request 4 in opposition, which was **withdrawn by the appellant** during the oral proceedings before the opposition division (see minutes, point 1).

Hence, its subject-matter has not been dealt with in the impugned decision. This was not contested by the appellant.

1.2 As stated in T 1067/08, not published in OJ EPO, point 7 of the reasons, the "*purpose of the inter partes appeal procedure is mainly to give the losing party a possibility to challenge the decision of the opposition division on its merits and to obtain a judicial ruling on whether the decision of the opposition division is correct (G 9/91 and G 10/91, OJ EPO 1993, 408, 420)*".

This means that *"parties to first-instance proceedings are not at liberty to bring about the shifting of their case to the second instance as they please, and so compel the board of appeal either to give a first ruling on the critical issues or to remit the case to the department of first instance. Conceding such freedom to a party (and/or to the department of first instance) would run counter to orderly and efficient proceedings. In effect, it would allow a kind of "forum shopping" which would jeopardise the proper distribution of functions between the departments of first instance and the boards of appeal and would be absolutely unacceptable for procedural economy generally*".

In order to forestall such conduct, Article 12(4) RPBA provides that the Board has the power to hold inadmissible any requests which could have been presented - in the present case, could have been maintained - in the first-instance proceedings.

The Board applies, to the benefit of the appellant, a more lenient "**should** have been presented" in this requirement, i.e. "should have been maintained", in the present case. In any case, the jurisprudence of the Boards of Appeal is quite clear in this respect: the request should have been subjected to the decision

under appeal so that the Board can conduct a final review of the reasons for the decision given on this point (see e.g. T 1067/08, *supra*, point 8.1 of the reasons; Case Law of the Boards of Appeal, 8th Edition, 2016, IV.E.4.1.4 and IV.E.4.3.2.d)

Therefore, taking into consideration the above principles, the main request is not admitted into the proceedings (Article 12(4) RPBA).

1.3 As put forward in its written submission dated 26 August 2016 and at the oral proceedings, the appellant argues that this request (the then auxiliary request 4 in opposition) was filed in due time and sufficiently in advance during the opposition proceedings for the respondent/opponent to react. The opposition division even took position on its subject-matter in its preliminary opinion which, hence, was then part of the discussions.

The appellant withdrew this request for increasing procedural efficiency as it was sure, in view of the negative preliminary opinion of the opposition division, that it would not be regarded as allowable. Further, the opposition division made it clear at the very beginning of the oral proceedings that only a limited number of requests would be discussed. Hence, the appellant, by withdrawing this request, followed the opposition division's demand and helped to ensuring an efficient procedure. It should not be penalised for that.

The appellant further argues that this very request was presented with the statement setting out the grounds of appeal, pursuant to Article 12(2) RPBA. Since its subject-matter is not complex and does not raise issues

which the Board or the respondent cannot reasonably be expected to deal with without adjournment of the oral proceedings, it should be admitted into the proceedings. It is surely not an abuse of the proceedings.

1.4 The Board cannot share this view for the reasons already given under point 1.2 above.

In addition, it is not because a request has been filed at some point during the opposition proceedings that the patent proprietor maintains the right to reintroduce it later in the proceedings, if withdrawn. By withholding the request, the impugned decision is completely silent on it. This means that the patent proprietor will present for the first time in appeal its arguments against the preliminary opinion of the opposition division, without the latter having dealt with these arguments. This does not enable the Board to review the decision in this respect. It may have been procedurally efficient for the patent proprietor, it runs counter to procedural efficiency before the Board.

Finally, the Board cannot see any development during the oral proceedings before the opposition division or any reasons in the impugned decision which could have made the re-introduction of the request in appeal acceptable pursuant to Article 12(4) RPBA. The fact that the subject-matter of this request is seen by the appellant as being not complex with no need to adjourn the oral proceedings concerns Article 13 RPBA, which is not the issue here.

2. *Auxiliary request 1*

Apart from the set of claims according to the patent as maintained by the opposition division, this auxiliary request further comprises additional claims 2-11 and 14, claims 2 and 14 being independent claims.

2.1 Admission into the proceedings

2.1.1 At the oral proceedings the respondent objected to the admission of this auxiliary request into the proceedings arguing that the subject-matter of the added independent claims 2 and 14 had been deliberately withdrawn during the opposition proceedings.

For supporting its view it referred to annex 4 of the minutes (see also annex II of the impugned decision), corresponding to the set of claims of the patent as maintained by the opposition division, in which it appears that the appellant actively deleted in claim 1 (see hand-written amendments/strikethrough) the subject-matter of claim 2 of the auxiliary request ("arranged in"). The same deletion was made in claim 3 of annex 4 of the minutes for the subject-matter of claim 14 of the present auxiliary request. Having them now in the auxiliary request amounts to requesting their reintroduction in appeal.

Consequently, the auxiliary request should not be admitted into the proceedings for the same reasons as those given for the main request under point 1 above.

2.1.2 The Board cannot share this view since the subject-matter of claims 2 and 14 of the auxiliary request, contrary to the respondent's view, has never been withdrawn by the appellant. As a matter of fact, their

subject-matters are comprised in, at least, the auxiliary requests 2, 2A and 5A dealt with in the impugned decision (see claims 1 and 13 of the then auxiliary requests 2 and 2A; claims 1 and 12 of the then auxiliary request 5A). The subject-matters are hence part of the factual and legal scope of the impugned decision to be reviewed by the Board.

The fact that these requests were regarded as not allowable by the opposition division on grounds not related to the patentability of their subject-matters, e.g. novelty and/or inventive step, is irrelevant. What matters is that these requests, more importantly their subject-matters, were at the basis of the impugned decision (see point XI, uncontested by the respondent) and, hence, not withdrawn. Consequently, the situation for the main request under point 1 above does not apply.

2.1.3 The subject-matters of the again added independent claims 2 and 14 correspond to the first alternative of the independent claims 1 and 13 of the former sixth auxiliary request filed with the statement setting out the grounds of appeal, pursuant to Article 12(2) RPBA. Their subject-matters were dealt with by the respondent in its reply dated 23 January 2013, points 6 and 7, and also by the Board in the annex to the summons to oral proceedings, points 10.2 to 10.4.

As a result, these claims, i.e the auxiliary request, cannot raise issues which the Board or the respondent could not reasonably be expected to deal with without adjournment of the oral proceedings, pursuant to Article 13(3) RPBA.

Therefore, the Board sees no reason not to admit the auxiliary request into the proceedings.

2.2 Objections against claims 1 and 13

2.2.1 As argued in its written submission dated 30 August 2016 and at the oral proceedings, the respondent considers that claims 1 and 13 of the auxiliary request do not fulfill the requirements of Article 123(2) EPC. The respondent holds the view that this objection should be admitted into the proceedings and taken into account by the Board as it reviews the impugned decision completely; only valid patents are to be maintained.

2.2.2 The Board cannot share this view taking account of the principle of the prohibition of *reformatio in peius*. When the patent proprietor is the sole appellant as in the present case, "*the patent as maintained by the Opposition Division in its interlocutory decision cannot be objected to by the Board of Appeal, either at the request of the respondent/opponent or ex officio*" (see G 1/99, OJ EPO 2001, 381, point 4.1 of the reasons).

Further, as stated in T 856/92, not published in OJ EPO, point 2 of the reasons, "*[S]since no appeal was filed against the maintenance of* ***these claims*** *(the proprietor of the patent is the sole Appellant), neither the Board nor the Opponent may challenge the maintenance of the patent on the basis of* ***these claims*** *(see decision of the Enlarged Board of Appeal G 9/92, OJ EPO 94, 875; in particular first paragraph of the headnote). No comment is therefore required with respect to these claims*" (in bold emphasis added by the Board; see also Case Law of the Boards of Appeal, 8th

Edition, 2016, IV.E.3.1 and IV.E.3.1.5; T 1626/11, not published in OJ EPO; point 1 of the reasons).

In the present case, no appeal was filed against the set of claims according to the patent as maintained, of which claims 1 and 3 correspond to claims 1 and 13 of the auxiliary request.

As a consequence, the independent claims 1 and 13 of the auxiliary request cannot be challenged in the present appeal so that the objections raised by the respondent against them are not admitted into the proceedings.

2.3 Amendments

2.3.1 Article 100(c) EPC is not a ground for opposition raised by the opponent. The claims of the patent as granted are regarded as being based on the original disclosure.

With respect to claim 1 of the patent as granted the features added to claim 2 of the auxiliary request are as follows:

"wherein the air-knife (5, 6) is arranged at a beam for controlling the location of the air-knife, and the stabilizing device is arranged in the beam that holds the air-knife".

With respect to claim 12 of the patent as granted the features added to claim 14 of the auxiliary request are as follows:

"- arranging an air-knife at a beam for controlling the location of the air-knife;

- arranging a stabilizing device in the beam that holds the air-knife".

These features are based on page 6, lines 29-33 of the application as originally filed as well as on original claim 10 (see paragraph [19] and claim 10 of the patent as granted).

The other claims 3-12 and 15-17 of the auxiliary request are based on claims 2-11 and 13-15 of the patent as granted, respectively.

As a consequence, the requirements of Article 123(2) EPC are fulfilled, as also admitted by the respondent at the oral proceedings.

2.4 Objection under Rule 80 EPC

2.4.1 As argued at the oral proceedings, the respondent considers that the device of claim 2 of the auxiliary request is a preferred embodiment of the device of claim 1 of the auxiliary request. In claim 1 it is referred to the stabilizing device being mounted anywhere on the beam ("**arranged at**"), while in claim 2 the stabilizing device is specified to be arranged **in** the beam. Claim 2 should therefore have been drafted as dependent on claim 1. As a consequence, the requirements of Rule 80 EPC are not fulfilled as introducing a further independent claim cannot be considered as having been occasioned by a ground for opposition.

2.4.2 The Board cannot share this view for the following reasons given by the appellant at the oral proceedings.

Claim 2 cannot be seen as a mere preferred embodiment to that of claim 1, i.e. as comprising all features of the device of claim 1 with only additional restrictive features. It is indeed not specified in claim 2 that the air-knife needs to be "fixedly connected to the stabilizing members" while this is the case in claim 1. In claim 2, the **relative arrangement** of the air-knife and the stabilizing device/members is not specified as it is in claim 1. The air-knife can be mounted anywhere on the beam, unrelated to the stabilizing device/ members. The air-knife can hence be mounted outside the beam while the stabilizing device as a whole is arranged in the beam. It is therefore clear to the Board that claims 1 and 2 of the auxiliary request concern two distinct embodiments.

This also applies *mutatis mutandis* to the method claims 13 and 14.

T 181/02, not published in OJ EPO, point 3.2 of the reasons, states after having referred to T 610/95, neither published in OJ EPO, that:

"*Only in exceptional cases can the replacement of a granted single independent claim by two or more independent claims be occasioned by a ground for opposition, for example in cases where a granted independent claim covers two specific embodiments. In such a case it has already been regarded as admissible under Rule 57a EPC* **1973 [Rule 80 EPC 2000]** *to file two independent claims, each protecting one of these two embodiments (see T 223/97)*" (in bold emphasis and addition by the Board; see also Case Law of the Boards of Appeal, 8th Edition 2016, IV.D.4.1.4.b).

The Board considers that the present case is such an exceptional case. As a result, the Board fails to see in which respect the auxiliary request contravenes the requirements of Rule 80 EPC.

The Board further notes that taking into consideration the restrictive view of the opposition division on the filing of two independent claims which has resulted in the non-allowability of some of the then requests on the basis of Rule 80 EPC (see impugned decision, points 3.1.7 and 3.1.8), the appellant had no other choice but to file for the first time such a request in appeal with two independent claims covering two distinct embodiments.

2.4.3 The requirements of Article 123(3) EPC are also fulfilled since each of the independent claims 2 and 14 comprises a further limitation with respect to the claims 1 and 12 of the patent as granted, respectively. This has not been contested by the respondent.

2.4.4 The features added to claims 2 and 14 of the auxiliary request with respect to claims 1 and 12 of the patent as granted, respectively, also do not introduce non-compliance with Article 84 EPC. This has not been contested by the respondent.

2.5 Novelty

The subject-matters of claims 2 and 14 are novel since none of the available prior art discloses all their features in combination. This has not been contested by the respondent.

2.6 Inventive step

The respondent contests that the subject-matter of claims 2 and 14 of the auxiliary request involves inventive step starting from D1, D2 or D3 as closest prior art, combined with the skilled person's common general knowledge.

2.6.1 **Document D1** discloses a device for stabilizing an elongated metallic strip ("Bandblech" 1) of magnetic material ("aus ferromagnetischem Blech") when coating the strip (1) with a metallic layer by continuously transporting the strip through a bath of molten metal ("Plattierzinkbad" 3), wherein the strip (1) is intended to be transported from the bath (3) in a transport direction (vertical direction; see arrow in figure 1) along a predetermined transport path, whereby the device comprises a wiping device ("eine Reihe von Düsen" 6) for wiping off superfluous molten metal from the strip (1) by applying an airflow in a line across the transport path of the strip (1) and wherein the line extends over essentially the whole width of the strip (see figure 2), wherein the wiping device (6) comprises at least one pair of air-knives (6) arranged with one air-knife on each side of the strip (1) (see figure 1), whereby the device comprises an electromagnetic stabilizing device ("Bänke von Magnetteilen"; "Elektromagnete" 8) which is arranged to stabilize the position of the strip (1) with respect to the predetermined transport path ("...daß der Streifen in einer bestimmten Mittelebene entsprechend gleichem Abstand zwischen den gennanten Düsen zu liegen kommt"; first sentence of paragraph linking pages 6 and 7) and which comprises at least one electromagnetic stabilizing member ("Elektromagnete" 8) on each side of the strip (1), and wherein the device comprises a

sensor ("Abstanddetektoren" 7) arranged to detect the position of the strip (1) in relation to the predetermined transport path, the electromagnetic stabilizing members (8) are arranged to apply a magnetic force to the strip in dependence on the measured detected position and in a direction substantially perpendicular to the predetermined transport path, the sensor (7) is configured to detect the position of the strip in a region adjoining the line where the airflow from the air-knives hits the strip (1), and the electromagnetic stabilizing members (8) are arranged adjacent to the air-knives (7) and to apply the magnetic force adjacent to the line where the airflow from the air-knives (7) hits the strip (page 1, first paragraph; pages 6 and 7; figures; claims 1 and 2).

2.6.2 The appellant considers that the following features of claim 2 are not known from D1:

- the wiping device applies an air flow in a line across the transport path of the strip;

- the line extends over essentially the whole width of the strip; and

- the wiping device comprises at least one pair of air-knives arranged with one air-knife on each side of the strip.

2.6.3 The Board cannot share this view for the following reasons as already provided in the annex to the summons to oral proceedings, which were not further contested by the appellant at the oral proceedings.

The air flow in D1 is applied "**in a** line" by nozzles ("Düsen" 6) which are aligned in a row ("eine Reihe von Düsen" 6; see figures 1 and 2). This applies even if the nozzles (6) of D1 are punctual air sources, contrary to the appellant's view. It appears also from figure 2 that the line extends over **essentially** the whole width of the strip as claimed. The term "essentially" used in claim 1 covers the possibility that the line does not extend completely over the strip width. In any case, as argued by the respondent, the skilled reader will consider that the wiping implicitly extends over the whole width of the strip (page 1, first paragraph; pages 6 and 7; figures; claims 1 and 2).

Further, the Board cannot share the appellant's view that the skilled person would not consider the plurality of nozzles of D1 as being an air-knife as claimed, on the basis that the skilled person would consider that air-knives provide a uniform and laminar sheet of air. As a matter of fact, even if it would be so that achieving a uniform and laminar sheet of air would be the intention of the skilled person when using air-knives, not all air-knives will mandatorily work as such in any conditions.

In view of this it is clear that D1 discloses one pair of air-knives arranged with one air-knife ("eine Reihe von Düsen" 6) on each side of the strip ("Bandblech" 1) (see figures 1 and 2).

The Board shares the appellant's view on what is stated in T 312/94, not published in OJ EPO, that as a general rule, "*in order to determine the true meaning of a document and thus its content and disclosure, generally no part of such a document should be construed in*

isolation from the remainder of the document: on the contrary, each part of such a document must be construed in the context of the contents of the document as a whole". The appellant has failed, however, to indicate how the other parts of the device of D1 would lead to another interpretation of D1 such that a plurality of nozzles arranged in a row does not fall under the definition of an air-knife in accordance with the contested patent.

2.6.4 **Document D2** discloses a device for stabilizing an elongated metallic strip (1) of magnetic material when coating the strip (1) with a metallic layer by continuously transporting the strip through a bath (2) of molten metal, wherein the strip (1) is intended to be transported from the bath (2) in a transport direction (vertical direction in figure 15) along a predetermined transport path, whereby the device comprises a wiping device ("gas wiper" 6) for wiping off superfluous molten metal from the strip (1) by applying an airflow in a line across the transport path of the strip (1) and wherein the line extends over essentially the whole width of the strip (as would the skilled person understand it from figure 15 and the goal of the wiping device, the strip plunging completely in the bath), wherein the wiping device (6) comprises at least one pair of air-knives ("gas wiper" 6) arranged with one air-knife on each side of the strip (1), whereby the device comprises an electromagnetic stabilizing device ("control unit" 7) which is arranged to stabilize the position of the strip (1) with respect to the predetermined transport path and which comprises at least one electromagnetic stabilizing member ("electromagnets" 13) on each side of the strip (1), and wherein the device comprises a sensor ("position sensors" 10) arranged to detect the

position of the strip (1) in relation to the predetermined transport path, the electromagnetic stabilizing members (13) are arranged to apply a magnetic force to the strip in dependence on the measured detected position and in a direction substantially perpendicular to the predetermined transport path, the sensor (10) being configured to detect the position of the strip in a region adjoining the line where the airflow from the air-knives hits the strip (1), and the electromagnetic stabilizing members (13) are arranged adjacent to the air-knives (6) and to apply the magnetic force adjacent to the line where the airflow from the air-knives (6) hits the strip (paragraphs 38 to 40 and 76 to 79; figures 7 and 15).

2.6.5 The appellant considers that D2 does not disclose the same features of claim 2 as those given under point 2.6.2 above vis-à-vis D1.

The Board cannot share this view for the following reasons provided in the annex to the summons to oral proceedings, which were not further contested by the appellant at the oral proceedings.

For the same reasons as those given under point 2.6.3 above vis-à-vis D1, the air flow in D2 is applied in a line by nozzles ("gas wiper" 6; see figure 15), the line extending over **essentially** the whole width of the strip as claimed (paragraphs [35] to [40] and [76] to [79]; figures 7 and 15).

Contrary to the appellant's view, the Board is of the opinion that the shape control system of figure 7 aiming at a "simultaneous control of the shape and the vibration on the metal strip" is an embodiment of "the

control unit (7) for controlling the shape and the vibration of the metal strip" used in figure 15.

2.6.6 **Document D3** discloses a device for stabilizing an elongated metallic strip ("web" 100) of magnetic material when coating the strip (100) with a metallic layer by continuously transporting the strip through a bath of molten metal ("molten zinc bath" 102), wherein the strip (100) is intended to be transported from the bath (102) in a transport direction along a predetermined transport path, whereby the device comprises a wiping device ("gas knives" 104, 106) for wiping off superfluous molten metal from the strip (100) by applying an airflow in a line across the transport path of the strip (100) and wherein the line extends over essentially the whole width of the strip, wherein the wiping device (104, 106) comprises at least one pair of air-knives (104, 106) arranged with one air-knife on each side of the strip (100), whereby the device comprises an electromagnetic stabilizing device ("magnetic actuators" 112) which is arranged to stabilize the position of the strip (100) with respect to the predetermined transport path and which comprises at least one electromagnetic stabilizing member (112) on each side of the strip (100), and wherein the device comprises a sensor ("position sensors" 110) arranged to detect the position of the strip (100) in relation to the predetermined transport path, the electromagnetic stabilizing members (112) are arranged to apply a magnetic force to the strip in dependence on the measured detected position and in a direction substantially perpendicular to the predetermined transport path, the sensors (110) being configured to detect the position of the strip in a region adjoining the line where the airflow from the air-knives hits the strip (100), and the electromagnetic stabilizing

members (112) are arranged adjacent to the air-knives (104, 106) and to apply the magnetic force adjacent to the line where the airflow from the air-knives (104, 106) hits the strip (page 8, third paragraph; figures 6-8).

2.6.7 The appellant considers that D3 does not disclose the features of claim 2 that the position sensors (110) and magnetic actuators (112) have to be positioned close to the air knives (104, 106). This would not be derivable from the schematic drawings of D3.

The Board cannot share this view for the following reasons provided in the annex to the summons to oral proceedings, which were not further contested by the appellant at the oral proceedings.

As a matter of fact, the expressions used in claim 2 "**in a region** adjoining the line" and "arranged **adjacent**" unambiguously covers the configuration shown in figures 6 and 7 of D3, even though they are indeed schematic (page 8, third paragraph; figures 6-8).

2.6.8 The Board shares the respondent's view that a beam holding the air-knife in the devices of D1, D2 and D3 is implicitly present in order to make them function. The feature of claim 2 that "the air-knife is arranged at a beam for controlling the location of the air-knife" is hence regarded as also being implicitly disclosed in each of the devices of the prior art documents D1, D2 and D3.

2.6.9 In view of the above discussion on their respective disclosure, the documents D1, D2 and D3 represent equivalent plausible closest prior art for the

discussion of inventive step of the subject-matter of claim 2 of the auxiliary request.

As admitted by the parties, the following feature of claim 2 is not disclosed by any of the documents D1, D2 and D3:

"the stabilizing device is arranged in the beam that holds the air-knife".

It is also the only distinguishing feature of claim 2 over each of the devices known from documents D1, D2 or D3.

2.6.10 Among the many alleged technical effects provided by the distinguishing feature which were mentioned by the appellant at the oral proceedings, paragraph [19] of the contested patent refers to achieving an efficient stabilization of the strip.

The problem to be solved can hence be seen as to modify the device of D1 (or D2, or D3) so that the stabilization of the strip is improved.

The respondent explicitly agreed at the oral proceedings with this problem to be solved.

2.6.11 The Board shares the appellant's view that there is no unambiguous disclosure in the documents D1, D2 or D3 of the relative arrangement of the air-knife and the stabilizing device, i.e. whether they are mounted on the same beam or on two distinct beams. The figures of D1, D2 and D3 are schematic and their respective description is silent on this issue. Further, should there be a single beam holding both the air-knife and the stabilizing device, there is no hint in the

available prior art documents, nor can it be considered to belong to the skilled person's common general knowledge, that the stabilizing device is to be "arranged in" that beam. As a consequence, the subject-matter of claim 2 involves inventive step.

2.6.12 At the oral proceedings the respondent argued that the subject-matter of claim 1 of the auxiliary request, which relates to the stabilizing device being "arranged **at**" the beam, cannot justify inventive step. As a consequence, also the subject-matter of claim 2 of the auxiliary request, which concerns a mere embodiment of said claim 1 in which the stabilizing device is "arranged **in**" the beam, cannot justify inventive step, more in particular in view of the skilled person's common general knowledge. The respondent held the view that the above distinguishing feature (see point 2.6.9 above) relates to a mere constructional choice of the non-inventive device of claim 1, i.e. an issue of design, which does not require inventive skills.

2.6.13 The Board cannot share this view. As a matter of fact, claims 1 and 2 of the auxiliary request refer to two distinct embodiments as already discussed under point 2.4.2 above.

Further, in view of the prohibition of the *reformatio in peius*, the premise that the subject-matter of claim 1 does not involve inventive step cannot be supported by the Board, so that the respondent's argument starting from this premise cannot hold either.

Finally, the distinguishing features are not the result of a mere design choice but rather of a technical solution to a technical problem. As already mentioned under point 2.6.11 above, this technical solution

results from the following steps to be performed by the skilled person: first to arrange the air-knife and the stabilizing device on the same beam, where difficulties may arise from this configuration such as a loss in flexibility for their individual set-up and maintenance; and second to select a specific position of the stabilizing device on that beam, the latter having to be suitable for accommodating the stabilizing device in it. These two steps to be performed by the skilled person justify inventive step.

2.6.14 As admitted by the parties at the oral proceedings, the above reasoning and conclusion on claim 2 apply *mutatis mutandis* to the independent method claim 14.

Consequently, the subject-matter of claim 14 involves inventive step for the same reasons as those given above for claim 2.

2.7 Description

The Board and the respondent see no objection against the adapted description for the auxiliary request, as filed at the oral proceedings.

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 with the order to maintain the patent in amended form on the basis of the following:

claims
1 to 17 filed as auxiliary request 1 with letter of 26 August 2016

description
pages 2 to 5 filed during the oral proceedings

figures
1 to 8 of the patent as granted

The Registrar: The Chairman:

G. Nachtigall H. Meinders

Decision electronically authenticated