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**Datasheet for the decision
of 9 January 2018**

Case Number: T 1073/12 - 3.2.03

Application Number: 01118841.4

Publication Number: 1232806

IPC: B21B13/14, B21B31/02

Language of the proceedings: EN

Title of invention:

Cluster type multistage rolling mill

Patent Proprietor:

Hitachi, Ltd.

Opponent:

SMS group GmbH

Headword:

Relevant legal provisions:

EPC Art. 54, 56, 100(a)

RPBA Art. 12(4)

Keyword:

Novelty - (yes)

Inventive step - (yes)

Late-filed evidence - request could have been filed in first instance proceedings (yes) - admitted (no)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

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Case Number: T 1073/12 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 9 January 2018

Appellant: SMS group GmbH
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Respondent: Hitachi, Ltd.
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 15 March 2012
rejecting the opposition filed against European
patent No. 1232806 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman G. Ashley
Members: C. Donnelly
E. Kossonakou
V. Bouyssy
M.-B. Tardo-Dino

Summary of Facts and Submissions

- I. The appeal lies from the decision of the opposition division rejecting the opposition against European Patent no. 1 232 806.
- II. The opponent (hereinafter: the "appellant") lodged an appeal against this decision in due form and time.

The appellant cited the following evidence submitted during the opposition proceedings to support its case:

- D1: EP 1 020 238 A (also referred to as "A3");
- A1: "Besichtigung der werkstattmontierten Edelstahl-Kaltbandgerüste für SKS und Yusko on 1 August 2000" (Works visit of the factory-installed stainless-steel cold rolling mill for SKS and Yusko on 1 August 2000), Brochure of SMS Demag AG;
- A1a: Enlargement of the right-hand figure of Brochure A1 with reference signs;
- A1b: Sales information for a 20-Roller cold rolling mill Type ZR22-D-53;
- A1c: Sales information for a 20-Roller cold rolling mill Type CM20RM70/300-52
- A2: "20- Rollen- Gerüst Zwei- Ständer- Bauweise CM 20 RM 88/406-53, Brochure of SMS Demag (relating to the rolling stand displayed at Metec '94)
- A4: "The *mannesmann cluster* Rolling mill - 20-Roll-Stands of Twin-housing design" Brochure of Engineering Mannesmann Demag (relating to the rolling stand displayed at Metec '94);
- A5: Original brochure in colour of A1;
- A6: List of participants of the visit cited in A1;
- A7: "Modern cold rolling stands for stainless steel", (QUANTE, HANS JÜRGEN) December 2000;
- A9: Photographs taken during the visit cited in A1.

A witness, Mr Lothar Zwingmann was heard during the oral proceedings before the opposition division in connection with A1 and A5.

It also relied on the following evidence submitted with its grounds of appeal:

A10: Quante: Hans Jürgen: Modern Rolling Mill, Technologies for Stainless Steel, published at the 49 International Congress for Material technology and Materials, Sao Paulo, October 1994, volume 5, pages 373 onwards.

A10a: Confirmation from the University library Hannover concerning the publication of A10 on 20 September 1995;

A11: Quante, Hans Jürgen et al, "Further oriented processes for the production of cold rolled stainless steel strip" published by the SEASIS Taiwan conference on High Value Added Steel Products and Related technologies, 10 to 12 May 1999, Taiwan, Session 7, Paper 1;

A12: MDS Mannesmann Demag Sack GmbH: "20 Roll mill Twin stand construction" Brochure, May 1993;

A12a: email correspondence concerning A12.

In order to prove that A11 was published before the priority date of the patent, the appellant has offered a witness: Mr. Martin Mann.

III. Decision under appeal

In its decision, the opposition division held that, even taking account of the witness statement from Mr. Zwingmann, A5 (and also A1, A1a, A1b, A1c) and the alleged prior use related to this document did not form part of the prior art, since Mr Zwingmann could not confirm that A5 had been distributed during the visit

of 1 August 2000. Furthermore, Mr Zwingmann stated that a machine corresponding to Ala was not to be seen during the visit. Therefore, in the opposition division's view there was no absolute certainty that A5 had been distributed.

The opposition division also concluded that the prospectus A4 had not been made available to the public, since the supposed printing date of May 1999 alone was not sufficient to establish the date of availability and there was no indication as to where, to whom and under what circumstances the prospectus A4 was distributed.

As regards the public availability of the brochure A2, the opposition division considered that the alleged printing date of "0894" i.e. August 1994 precluded its distribution at the Metec '94 fair which took place in Düsseldorf between 15 and 22nd June 1994. Since no other evidence had been provided regarding its possible distribution, it concluded that A2 did not form part of the state of the art. However, the opposition division did consider the circumstances of the actual display of the machine represented in the pictures of A2 ("A2 prior use ") at the Metec '94 fair as being sufficiently established.

- IV. In a communication dated 7 June 2017, pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to the summons to oral proceedings, the Board informed the parties of its provisional opinion.

- V. By letter of 11 December 2017 the appellant withdrew its request for oral proceedings.

Oral proceedings were held as scheduled on 9 January 2018 in the absence of the appellant. At the end of the debate the following requests of the parties were confirmed:

The appellant had requested in the written procedure that the decision under appeal be set aside and that the patent be revoked.

The respondent requested that the appeal be dismissed, alternatively that the patent be maintained in amended form on the basis of auxiliary requests 1 or 2, filed with the reply to the grounds of appeal dated 10 December 2012.

VI. Claim 1 as granted reads:

"Cluster type multistage rolling mill comprising:

- a top inner housing (8) containing a group (5) of rolls arranged above a pass line (PL),
- a bottom inner housing (9) containing a group (6) of rolls arranged below the pass line (PL),
- an outer housing (10,11) containing and supporting said top and said bottom inner housings (8,9),
- top side supporting means (15, 16) disposed between the top inner housing (8) and the outer housing (10,11), and
- a bottom side supporting means (17, 18) arranged between the bottom inner housing (9) and the bottom side of the outer housing (10, 11),

characterised in that

- there are provided two outer housings (10, 11), one at the operating side and the other at the driving

side, supporting the top and bottom inner housings (8,9) and
- each outer housing (10,11) is provided with two top side supporting means (15, 16) disposed at the front side and at the back side with respect to the pass direction."

VII. Summary of the parties' submissions

Appellant's case

Claim 1 is not new with respect to A10, A11 and A12.

Claim 1 is also not new with respect to the public prior use of the rolling mill shown in A2 which was sold and installed at Krupp Thyssen Nirosta in 1995 and displayed during an exhibition at the Metec Trade Fair 1994 ("Messe Metec 94").

The opposition division was wrong in its analysis of what was divulged at the Metec '94 fair since it incorrectly assessed the skilled person's ability to deduce features of the apparatus which must have been inherently present.

The opposition division was also wrong not to accept that the prospectus A5 was handed out during the work's visit of 1 August 2000.

Claim 1 does not involve an inventive step in view of:

(i) A5 /photograph showing wall-diagram in A9 and the skilled person's general knowledge (formally A4 is referred to in the heading to paragraphs 5.6 and 5.7 dealing with inventive step in the grounds, however, it

is clear from the substantive content that A5 is meant); or

(ii) A7 in combination with the skilled person's general knowledge.

Respondent's case

Documents A10, A11 and A12 should not be admitted into the appeal proceedings since they could have been filed in opposition (Article 12(4) RPBA). Furthermore, the documents are of such poor quality as to be barely legible. In particular, the circumstances in which A12 is alleged to have been distributed are not clear.

Prior use Metec 94

The photograph in A4 was not taken in 1994 and the prospectus A2 was not printed prior to the filing date of the patent.

In any case, it is undisputed that the rolling mill exhibited at Metec 94 was not equipped with any top-side supporting means (see the decision point 4.2.1). This fact has merely been alleged by the appellant on the basis of the position of the hydraulic lines. As reasoned by the opposition division, there is a variety of elements that could theoretically be installed at that place of the machine and not all of them can be considered as "supporting elements" (see point 6.2.1.3 of the decision).

A7 is also of such poor quality that its contents cannot be reasonably recognized.

Reasons for the Decision

1. Admissibility of the appeal

Although the appellant's case introduces considerable fresh material and confuses document references, several lines of argument setting out why the contested decision is considered incorrect have been substantiated. The appeal is therefore admissible.

2. State of the art

It is first necessary to establish which documents and evidence constitute the state of the art for consideration in the appeal proceedings.

2.1 Public prior uses

Reference to two public prior uses, which were also cited in the opposition proceedings, is made in the grounds of appeal:

(i) Sale made in 1995 by Krupp Thyssen Nirosta in Krefeld and the exhibition of the essential components of the same rolling mill at the Metec '94 fair as shown in A2. The alleged sale would constitute a further prior use, but no supporting documentation appears to have been submitted.

(ii) the works visit of 1st August 2000 to inspect a cold rolling mill stand as allegedly shown in A1, A1a, A1b, A1c and A5 (original brochure in colour of A1), additional evidence given in A6 and A9.

- 2.1.1 Regarding the public availability of the brochure A2, the opposition division is correct in reasoning that the alleged printing date of "0894" i.e. August 1994 precluded its distribution at the Metec '94 fair which took place in Düsseldorf between 15 and 22 June 1994. Besides, according to the contested decision (point 4.1.3 of the reasons) the opponent confirmed not being able to provide any information regarding the publication and/or distribution of A2. In the absence of any other evidence regarding its possible distribution, it must be concluded that the brochure A2 itself does not form part of the state of the art.
- 2.1.2 However, the board agrees with the opposition division that the circumstances of the actual display of the machine represented in the photographs of A2 ("A2 prior use") at the Metec '94 fair are sufficiently substantiated.
- 2.1.3 The appellant's submissions with respect to the alleged prior use of the works visit on 1 August 2000 are actually made in paragraph 5.6 of its grounds of appeal entitled "Mangelnde Erfindungshöhe des Gegenstandes des Streitpatents ausgehend von der A4". Essentially it is argued that the opposition division was wrong to require a standard of "up to the hilt" or absolute certainty when deciding that A5 (original brochure in color of A1) had not been distributed and made available to the public during the works visit.
- 2.1.4 Although the grounds of appeal include two sections, 5.6 and 5.7, alleging a lack of inventive step starting out from A4, neither section actually relates to the content of A4. Section 5.6 mentions documents A1, A5 and A9 with respect to the works visit of 1 August 2000 and is mainly concerned with the level of proof applied

to the public availability of A1/A5 by the opposition division when not admitting A5 into the procedure. Section 5.7 also clearly relates to the brochure A5, since constant reference is made to the Yusko plant as depicted in the figure on page 3 which is also to be seen in one of the photographs comprised in A9.

2.1.5 However, during the oral proceedings the respondent conceded that the figure on page 3 of A5 was actually the same as figure 3 of A7. Since the prior publication of A7 is not disputed, there is no need to enter into a detailed discussion of whether A5 was made publically available since the content referred to by the appellant is no more relevant than that comprised in A7.

2.2 *Prospectus A4*

Although A4 has been formally mentioned in the title of the inventive step attacks in sections 5.6 and 5.7 of the grounds of appeal (see below), the substance of these sections actually refer to other documents. There is therefore no need to discuss whether the opposition division exercised its discretion correctly under Article 114(2) EPC in not admitting A4, which was filed after the expiry of the opposition period, since the submissions concerning inventive step clearly refer to A5.

2.3 *Documents filed with the grounds of appeal*

2.3.1 The grounds of appeal also refer, for the first time, to disclosures made at conferences in Sao Paulo in 1994 and in Tehran in 1999 (A10 and A11 respectively), as well as a sales brochure from Mannesmann from 1993 (A12).

2.3.2 There appears to be no reason, nor has the appellant given one, why documents A10, A11 and A12 could not have been filed during the opposition proceedings (Article 12(4) RPBA). Furthermore A10 and A11 are of such poor quality that it is impossible to make out any detail in the drawings. As regards A12, the appellant's reasoning as regards to lack of novelty is essentially based on a reference to the undecipherable figures of A11. Also, it is not clear from A12a which "leaflet" was attached to the email or under what circumstances the distribution took place, such that the only indication of public availability is the alleged printing date of "0593".

2.3.3 The appellant was informed of these shortcomings in the board's provisional opinion, but still chose not to make any further substantive submissions or to attend the oral proceedings to clarify the issues. At this stage in the proceedings it is to be expected that any evidence presented does not place any burden on the board or the parties to carry out further investigations as to its validity or relevance.

In view of this, A10, A11 and A12 are not admitted into the procedure, nor is the witness offered to be heard at this stage of the proceedings.

2.4 In conclusion, only the prior art disclosed in the photographs of the A2 prospectus and documents A3 and A7 will be taken into consideration.

3. *Novelty*

3.1 The appellant submits that the subject-matter of claim 1 lacks novelty with respect to A10, A11, A12 as well as A2 relating to the prior use at the Metec '94 fair.

3.2 Therefore, the only novelty attack remaining is that with respect to the prior use at the Metec '94 fair based on the disclosure of the photographs in A2.

3.3 It is common ground between the parties that the photographs in prospectus A2 which show the equipment presented at the Metec '94 fair disclose:

- a top inner housing containing a group of rolls arranged above a pass line (implicitly present),
- a bottom inner housing containing a group of rolls arranged below the pass line,
- an outer housing containing and supporting said top and said bottom inner housings,
 - a bottom side supporting means arranged between the bottom inner housing and the bottom side of the outer housing, and
- that there are provided two outer housings, one at the operating side and the other at the driving side, supporting the top and bottom inner housing.

3.4 The respondent contests that the following features are disclosed:

- (i) - top side supporting means are disposed between the top inner housing and the outer housing;
- (ii) - each outer housing is provided with two top side supporting means disposed at the front side and at the back side with respect to the pass direction.

3.5 The board agrees with the respondent that it is not immediately apparent that the skilled person visiting the Metec '94 fair would have been aware of these features since, as reasoned by the opposition division, a variety of elements could have been installed at those particular places of the apparatus.

3.6 Thus, the subject-matter of claim 1 is new with respect to the disclosure at the Metec '94 fair.

4. *Inventive step*

4.1 The appellant's arguments for lack of inventive step are based on:

(i) A5/A9 and the skilled person's general knowledge;
or

(ii) A7 and skilled person's general knowledge

4.2 Although the copy of A7 available to the board is of such poor quality that it is impossible to reliably make out any structural detail from figure 3, it is possible to refer to the figure on page 3 of A5 since the respondent acknowledged during the oral proceedings that they are the same. Therefore, the objection based on the figure on page 3 of A5/the photograph of the wall diagram in A9 is in fact the same as that based on figure 3 of A7.

4.3 The appellant accepted in the written procedure that the subject-matter of claim 1 differs from the apparatus shown in figure 3 of A7 in that:

(ii) - each outer housing is provided with two top side supporting means disposed at the front side and at the back side with respect to the pass direction.

The appellant has argued that this distinguishing feature, also identified above in relation to the disclosure of the photographs of A2, produces no technical effect. Therefore, it identified the objective technical problem as being simply one of providing an alternative type of equipment.

In its view, the skilled person is aware that the simple reversal of the supporting means from there being two at the bottom and one at the top to one at the bottom and two at the top would have no influence on the stiffness or quality of the finished product. Therefore, such a modification would be carried out according to operational needs such as the need to improve access for maintenance and does not involve an inventive step.

4.4 However, according to the patent at paragraph [0009] "By supporting the top inner housing in the both sides of the operating side and the driving side each at two points not at one point, as described above, the displacements of backing bearings in the both sides caused by the components of the rolling load can be made small, and reduction of the mill rigidity can be suppressed." This effect is illustrated in figures 5 and 6 of the patent:

FIG. 5 (PRIOR ART)

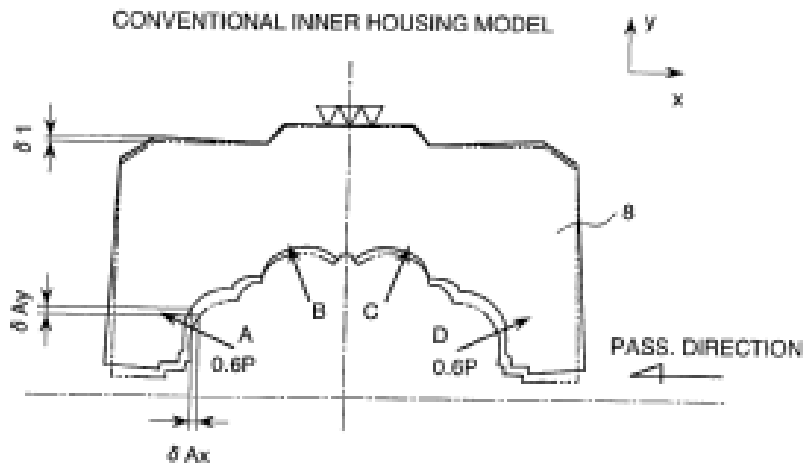
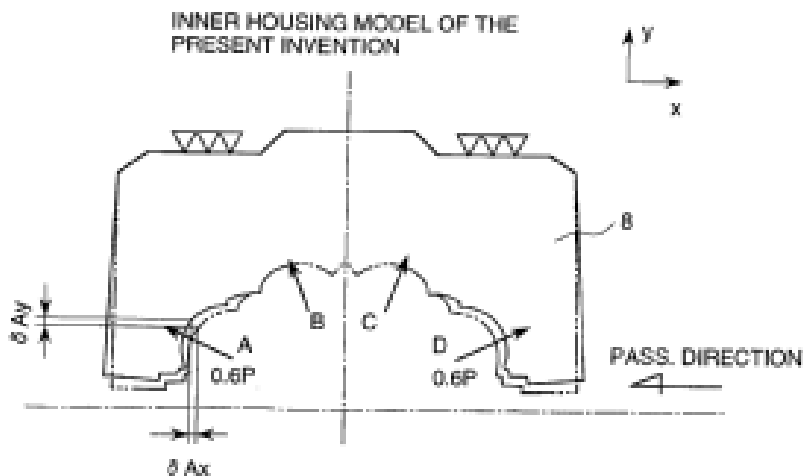


FIG. 6



4.5 As explained by the respondent during the oral proceedings, (also see the patent paragraphs [0012], [0016]) it is desirable to reduce the dimensions (and therefore the weight) of the top inner housing which needs to be lifted and held in position. However, this reduction in weight leads to a reduction in stiffness. This problem is solved by providing each outer housing with two top side supporting means disposed at the

front side and at the back side with respect to the pass direction.

- 4.6 Therefore, the objective technical problem can be seen as one of how to reduce the dimensions (and therefore weight) of the top inner housing whilst maintaining the necessary mill rigidity.
- 4.7 Starting out from either A7 or A2 and faced with this problem, the skilled person would find no disclosure, suggestion or hint at the proposed solution or its effect in the available prior art, nor is it obvious on the basis of common general knowledge alone.
- 4.8 Therefore, the board concludes that the subject-matter of claim 1 as granted meets the requirements of Articles 54 and 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Spira

G. Ashley

Decision electronically authenticated