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D E C I S I O N
of 9 May 2000

Case Number: T 0869/98 - 3.3.6

Application Number: 91850097.6

Publication Number: 0454643

IPC: D21H 25/12

Language of the proceedings: EN

Title of invention:

Coating device for coating of a size-press roll, paper or board

Patentee:

VALMET PAPER MACHINERY INC.

Opponent:

Jagenberg Papiertechnik GmbH
Voith Sulzer Papiermaschinen GmbH

Headword:

Coating device/VALMET

Relevant legal provisions:

EPC Art. 123(2), (3), 84, 54, 111(1)
EPC R. 29(1), 35(12)

Keyword:

"Main request: clarity - no proper definition of the matter for which protection is sought"

"First auxiliary request: Interpretation of the claims: novelty - no"

"Second auxiliary request: Amendments admissible; novelty - yes; remittal - yes, despite request for final decision"

Decisions cited:

G 0002/88, G 0009/91, T 0611/90, T 0152/93, T 0337/95

Catchword:

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Case Number: T 0869/98 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 9 May 2000

Appellant: VALMET PAPER MACHINERY INC.
(Proprietor of the patent) Punanotkonkatu 2
00130 Helsinki (FI)

Representative: Rostovanyi, Peter
AWAPATENT AB
Box 5117
200 71 Malmö (SE)

Opponent II: Jagenberg Papiertechnik GmbH
Jagenbergstrasse 1
D-41468 Neuss (DE)

Representative: Thul, Hermann, Dipl.-Phys.
Zentrale Patentabteilung
Rheinmetall AG
Rheinmetall Allee 1
D-40476 Düsseldorf (DE)

Opponent III: Voith Sulzer Papiermaschinen GmbH
St. Pöltener Str. 43
D-89522 Heidenheim (DE)

Representative: Marsh, Ray D., M.A.
Hoffmann Eitle
Patent- und Rechtsanwälte
Postfach 81 04 20
D-81904 München (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 1 July 1998
revoking European patent No. 0 454 643 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: P. Krasa
Members: G. Dischinger-Höppler
C. Rennie-Smith

Summary of Facts and Submissions

I. The appeal is from a decision of the Opposition Division to revoke European patent No. 0 454 643. The decision was based on the claims as granted, the only independent claim reading:

"1. Coating device for coating of a size-press roll, paper or board or of an equivalent moving base, comprising a revolving coating bar (11,21,41,51,81,101), which rests against the moving base (4,5,92a,W), which extends across the machine width, which is supported in a cradle (12,22,34,103) substantially over its entire length, and which said coating bar is fitted to spread and to smooth the coating agent onto the moving base (4,5,92a,W), so that the profile of coating quantity can be regulated under control which said coating agent was introduced into the coating device (10,20,100), in the direction of running of the moving base (4,5,92a,W), before the coating bar (11,21,41,51,81,101), characterized in that the coating bar (11,21,41,51,81,101) is a rigid smooth bar having a diameter of at least 18 mm."

II. Based on a number of citations, three oppositions were filed against the patent in its entirety, *inter alia* on the grounds of Articles 54 and 56 EPC (Article 100(a) EPC). However, one opposition (of the first Opponent) was withdrawn by letter of 5 February 1998.

III. In its decision, the Opposition Division found that the claimed subject-matter lacked novelty in view of document

(4) US-A-2 676 563.

In particular, the Opposition Division held that the constructional features of the coating device and the function of the doctor disclosed in document (4) were the same as in the claimed device.

- IV. Oral proceedings were held before the Appeal Board on 3 May 2000, during which the Appellant (Proprietor) filed two new sets of 8 claims each as its main request and second auxiliary requests and asked for maintenance of the claims as granted to be treated as the first auxiliary request. The amendments made to the only independent claims of the main and second auxiliary requests are as follows:

Claim 1 of the main request differs from that of Claim 1 as granted by inserting the term "of short-dwell type" after "Coating device" and replacing the term "before the coating bar (11,21,41,51,81,101), characterized" by "*into a pressurized coating-agent chamber (16,26,106) placed before the coating bar (11,21,41,51,81,101), which chamber is, besides by said coating bar (11,21), also defined by a roll face (4,5), by a front wall (14,24,102) of the coating-agent chamber, as well as by possible lateral seals, characterized*".

Claim 1 of the second auxiliary request differs from that of Claim 1 as granted in that the term "before the coating bar (11,21,41,51,81,101), characterized" is replaced by "*into a coating-agent chamber (16,26,106) placed before the coating bar (11,21,41,51,81,101), which chamber is, besides by said coating bar (11,21), also defined by the roll face (4,5), by the front wall (14,24,102) of the coating-agent chamber, as well as by*

possible lateral seals, characterized".

Claims 2 to 8 of the second auxiliary request have the same wording as the respective claims of the main request.

V. During the appeal proceedings, the parties - apart from document (4) - relied on the following further documents from among those previously considered:

(1) WO-A-88/05698;

(9) US-A-2 946 307;

(10) US-A-2 970 564;

(11) US-A-2 560 572;

(13) *Wochenblatt für Papierfabrikation*, 23/24, 1987, pages 1063 to 1068;

(15) US-A-4 889 073;

(16) G.L. Booth, *Coating Equipment and Processes*, 1970, Lockwood Publishing, New York, pages 82 to 91;

and

(17) DE-A-3 620 374.

VI. The Appellant submitted in essence that the bar coater as claimed was a short-dwell type coater in accordance with the definition given in the patent in suit and fundamentally different from the gate roll coater including a doctor as disclosed in document (4). In

contrast to the presently claimed coating bar which was fitted to spread and smooth the coating onto the moving base, the doctor rod used according to document (4) had merely a wiping function but did not coat.

The Appellant further submitted that the claimed subject-matter was also novel as against the other citations.

VII. The Respondents (Opponents II and III) raised objections under Article 84 EPC concerning the following amendments made to the claims in the main and/or second auxiliary requests:

- the insertion of the term "short-dwell type" was either redundant or rendered the claims unclear;
- the definition of the coating device used the term "roll face" which was not a feature of the device;
- the optional term "possible lateral seals"; and
- the term "fitted to spread ... so that the profile ... can be regulated under control" contradicted the requirement for the bar to be rigid.

Concerning novelty of the subject-matter as granted in accordance with the Appellant's first auxiliary request, the Respondents supported the reasons given in the contested decision. They argued in essence that it was not possible to make a distinction between the functions of a coating bar as claimed and a prior art doctor rod. Moreover, the teaching of documents (10), (11) and (15) also anticipated the subject-matter of Claim 1 of this request.

Concerning the second auxiliary request, the Respondents, during the oral proceedings, relied solely on document (15) as anticipating the subject-matter claimed therein.

- VIII. The Appellant requested that the decision under appeal be set aside and that the patent be maintained in accordance with its main request or alternatively its first or second auxiliary requests.

The Respondents requested that the appeal be dismissed.

Reasons for the Decision

1. *Main Request*

1.1 Amendments (Articles 123(2)(3) and 84 EPC) - Admissibility of the Request

- 1.1.1 The late filed Claim 1 of the main request was amended by specifying the coating device as to be of the "short-dwell type" and to include a "pressurized" coating agent chamber which - in the direction of running of the moving base - is placed before the coating bar and is defined by said coating bar, the roll face of the size press roll, the front wall of the coating agent chamber and by possible lateral seals.

These amendments find support on page 4, lines 18 to 22 and page 9, lines 1 to 3 of the application as originally filed. The amendments further bring about a restriction of the extent of the scope of the claims in that the means for introducing the coating agent has been specified in accordance with the disclosure in

column 3, lines 17 to 25 and column 6, lines 7 to 11 of the patent in suit.

The requirements of Article 123(2) and (3) EPC are, therefore, met.

- 1.1.2 Article 84 EPC, *inter alia*, requires that the claims shall define the matter for which protection is sought. This requirement is supplemented in Rule 29(1) EPC in that the matter for which protection is sought shall be defined in the claims in terms of technical features of the invention. Further, according to the general provisions governing the presentation of the application documents laid down in Rule 35 EPC, "use should be made of technical terms, signs and symbols generally accepted in the field in question" (Rule 35(12) EPC, last sentence). In the Board's opinion, these requirements reflect the principle that the wording used in a claim enables determination of the protection conferred by a patent (G 2/88, OJ EPO 1990, 93; Corr. OJ EPO 1990, 469, reasons Nos. 2.4 and 2.5) or, in other words, the wording of the claims must be such that "the public is not left in any doubt as to which subject-matter is covered by a particular patent and which is not" (T 337/95, OJ EPO 1996, 628, reasons Nos. 2.1 to 2.4).

In the present case, the subject-matter for which protection is sought is a coating device which, *inter alia*, is defined by being "of short-dwell type".

The Appellant argued that the term "short-dwell type" stood for particular apparatus features and was defined in column 3, lines 18 to 25 and column 6, lines 3 to 10 of the patent in suit. By contrast, a coater comprising

a doctor was not of this type, because the doctor was - in comparison to the short-dwell type arrangement - distanced from where the coating agent was applied.

The Respondents submitted that the words "short-dwell type" had no precise and generally accepted meaning in the art. The words "Short-Dwell Coater" were claimed as a trademark of the first Opponent (see document (17), column 2, lines 41 to 43), but use of "short-dwell" in the patent in suit was not confined to that company's products. Accordingly, when used in a claim, the words "short-dwell type" rendered the scope of protection unclear.

Therefore, the term could only be given its literal meaning and/or such meaning, if any, as the patent in suit provides.

The Board shares the Respondents' opinion that, in its literal meaning, the term "short-dwell" is a relative term which simply means a particular period of time between application of the coating agent and action of the coating bar, during which period of time fluid from the coating agent can more or less penetrate into the surface of the moving base before it is spread and smoothed by the coating bar. However, this period of time is - as a matter of course - also influenced by further constructional options such as the distance between the locations where the coating is applied and where the bar comes into action, and even by operational options, e.g. the operating speed of the size-press roll. None of these options is defined in the patent in suit.

According to the definition in column 3 of the patent

in suit, a coating device of the "short-dwell type" is one in which the coating agent is introduced into a pressurized coating agent chamber placed before the coating bar and defined by the coating bar, the roll face, the front wall of the coating agent chamber, as well as by possible lateral seals. Claim 1, however, contains both the term in question and that definition of the coating agent chamber and thereby creates uncertainty as to whether or not the definition of the pressurized coating agent chamber in fact supplies the full meaning of the term "short-dwell type" or whether the term itself is simply redundant and should be deleted from the claim.

Since there is nothing else on file which would further explain the meaning of "short" or "short-dwell type", that uncertainty leaves the skilled reader in doubt as to the extent of the subject-matter actually covered by the wording of Claim 1.

Therefore, Claim 1 of the main request does not, in the Board's judgment, fulfill the requirements of Article 84 EPC.

Moreover, the term "pressurized" does not define, as was conceded by the Appellant, a constructional feature of the coating device. Thus, the said amendments clearly not being allowable and not being apt to overcome the grounds of opposition, the Board finds the late filed main request inadmissible.

2. *First Auxiliary Request*

2.1 Interpretation of Claim 1

It is a prerequisite for deciding the question of novelty to have a clear definition of the subject-matter as depicted by the wording of Claim 1. In the present case, in order to permit a distinctive evaluation of the prior art, it is necessary to establish what meaning can be given to the following features of Claim 1:

- (a) "a coating bar", in particular whether this term confers a specific meaning on the coating device comprising it;
- (b) the property of the coating bar of being "fitted to spread and to smooth the coating agent onto the moving base, so that the profile of coating quantity can be regulated under control"; and
- (c) the property of the coating bar of being "rigid" and "smooth".

To answer these questions, two sources of information may be consulted, firstly, the description of the patent in suit and, secondly, the general technical knowledge of someone skilled in the art.

- 2.1.1 Concerning the definition of the coating bar (item a) above), the patent in suit distinguishes principally between a blade coater and a bar coater as two alternative coating devices. The patent in suit expressly relates to the latter type, i.e. bar coaters (column 1, lines 16 to 21). The patent then refers to document (10) as disclosing such bar coaters, however with bars of small diameter (column 1, line 42 to column 2, line 4 of the patent in suit). The patent also refers to document (1) as forming the basis of the

preamble of Claim 1 and disclosing a coating bar, however with an elastic outer layer (column 2, lines 9 to 11 of the patent in suit). The Board, therefore, concludes that a coating bar within the meaning of the preamble of Claim 1 is simply the bar used in a bar coater and, further, that the term in principle encompasses the bar of document (1) which is described as a scraping bar (Rakelstange) (see abstract) as well as that of document (10) which is described as doctor rod (see e.g. column 2, lines 46 to 49). The Board accepts that the coating bar may also be one which is used in accordance with other types of bar coaters than those disclosed in document (1) (e.g. Figure 2). However, Claim 1 of the first auxiliary request is not in any way restricted to a particular kind of coating device.

Concerning document (10), the Appellant argued that there was a substantial difference in function between the bars shown in figures 1 and 2 and those in figures 3 and 4, in that the latter did not spread the coating agent onto the applicator roll and that, therefore, these bars were not coating bars. However, the Board cannot accept this argument since the initial application of the coating composition onto the applicator roll is due to the fact that the rotation roll transports some of the coating composition from a pool containing the composition (column 3, lines 34 to 35). This application would also occur in the absence of the bar. If anything, the task of a coating bar is, therefore, to reduce the amount of the coating and/or to spread it into a smooth film. Consequently, the bars exemplified in all figures of document (10) as well as the bars in the claimed device are all suitable for the same purpose, namely for metering a size film by

removing surplus coating and distributing and smoothing the remainder.

- 2.1.2 Concerning item (b) (see above 2.1, first paragraph), the Respondents argued that, contrary to the requirements of Article 84 EPC, the term in question contradicted both the description of the patent in suit and the requirement of Claim 1 that the bar be rigid since, according to column 1, lines 45 to 52 of the patent in suit it was not possible to use large diameter bars because - owing to their thickness - such bars were too rigid to provide an adequate profiling.

According to Article 100 EPC an opposition cannot be based on the grounds of Article 84. Since, in the present case, the term in question was present in the granted version of Claim 1, the corresponding objection of the Respondents cannot be considered at the present stage of procedure. Instead, according to the established jurisprudence of the Boards of Appeal, in a case like this the wording of the claims has, if necessary, to be interpreted in the light of the description of the patent in suit.

Since document (1) forms the preamble of Claim 1 (see 2.1.1 above), it also forms the basis for the definition of the term "coating bar which is fitted to spread and to smooth the coating onto the moving base, so that the profile of the coating quantity can be regulated under control" contained in the preamble. The scraping bar of document (1) includes diameters of up to 20 mm, hence also of at least 18 mm, and is described as being suitable for removing a surplus of coating composition and generating uniform coating films (page 5, first and third paragraph).

Consequently, the term "fitted to spread and to smooth ... so that the profile ... can be regulated under control" must be interpreted in this same sense, i.e. fitted to remove surplus coating and thereafter uniformly distribute and smooth the remainder. Nothing in the patent in suit suggests that the coating bars disclosed therein had any other function or were particularly modified for any other purpose.

- 2.1.3 Concerning item (c) at 2.1 above, the description of the patent in suit provides sufficient information for an adequate definition of the terms "rigid" and "smooth":

The coating bar is rigid if it has a "unified and solid construction" (column 4, lines 30 to 33), or if it "is made of a tube, e.g. chromium-plated copper or steel" (column 5, lines 40 to 45). Apart from this, only the diameter of the bar, which according to Claim 1 is at least 18 mm, can affect its rigidity. No other properties of the coating bar capable of influencing its rigidity are available from the description of the patent in suit. Hence, any bar of a unified and solid construction or in the form of a tube and having a diameter of at least 18 mm must be considered to have the implied property of being "rigid" within the meaning of the patent in suit.

With respect to the kind of surface of the bars, the patent in suit refers to prior art bar coaters having faces with grooves or steel wire for metering the size film (column 1, line 16 to column 2, line 8). It is clear from this passage that these bars are not meant to be covered by the term "smooth bar". Moreover, the

expressions "smooth", "grooved" and "wire-wound", when used in connection with bar or rod coaters, are generally known in the art and describe the three commonly used types of rods (see document (16), pages 84 and 85), the difference between grooved or wire-wound bars on the one hand and smooth bars on the other hand being that the surface of the former have been deliberately modified either by winding a wire around it or by cutting grooves into it. It follows that a smooth bar is simply one which is neither grooved nor wire-wound with the consequence that it is not necessary in the present case to denote, for the purpose of definition, a particular degree of smoothness.

2.2 Novelty

The patent in suit, on the basis of the claims of the former main request (now the first auxiliary request), has been revoked for lack of novelty over the disclosure of document (4).

This document describes a coating device for coating an applicator roll of the size press type wherein the coating material is directly applied to the surface of the applicator roll in excess and without regard to uniformity. The device comprises a rotating doctor rod which is supported in a cradle throughout its working length and extends over the entire width of the paper machine. It is pressed firmly and uniformly against the rubber-like surface of the applicator roll to remove the surplus coating material from the surface of the applicator roll and to **smooth the residual film of coating material** into a uniform layer of the desired thickness (column 2, line 24 to column 3, line 5;

column 6, lines 1 to 65). In view of the meaning given to the coating bar and its function (see items (a) and (b) at 2.1.1 and 2.1.2 above), the coating device of document (4) therefore includes all the features of the preamble of Claim 1.

The doctor rod of document (4) is made of chromium plated steel (column 6, lines 6 to 9). Neither wire-wound nor grooved surfaces are mentioned for the doctor rod which, in view of the intended effects of the doctor rod, means that its surface is smooth. This finding is corroborated by Figure 6 showing details of the respective coating device and in particular a doctor rod with a smooth surface. The diameter of the doctor rod may be from 1/8 inch up to several inches (column 7, lines 68 to 70), in particular 7/8 inches (column 8, line 7) corresponding to 22 mm. Accordingly, the coating device of document (4) also includes the features of the characterizing portion of Claim 1 in that the rod is rigid and smooth within the meaning established at 2.1.3 above and has the required diameter.

The Board is aware that the coater of document (4) is known in the art as a gate roll coater. However, since the claimed coating device is not restricted to a particular type, it cannot be distinguished via this feature from that disclosed in document (4).

For these reasons, the Board confirms the Opposition Division's decision that the subject-matter of Claim 1 of the first auxiliary request, which corresponds to Claim 1 as granted, is not novel in view of the teaching of document (4).

3. *Second auxiliary request*

3.1 Amendments (Articles 123(2)(3) and 84 EPC)

3.1.1 Claim 1 of the second auxiliary request differs from that of the granted version (now the first auxiliary request) in that the coating agent chamber is defined.

Support for these amendments is again found on page 4 of the application as originally filed and in column 3 of the patent in suit (see 1.1.1 above), where the coating agent chamber is disclosed. However, in contrast to the chamber as recited in Claim 1, the chamber is denoted in said passage as being "pressurized".

The omission of the term "pressurized" with respect to the chamber does not, in the Board's view, contravene the provisions of Article 123(2)(3) EPC for the following reasons:

Firstly, the term "pressurized" is not a constructional feature of the device, but rather a feature defining operational conditions when the device comes into action. Secondly, whilst the term suggests that the chamber should be suitable to withstand some internal superatmospheric pressure, the chamber itself is not necessarily sealed and, hence, not necessarily closed or absolutely tight. As conceded by the Appellant, the term "pressurized", therefore, has no delimiting character. Its omission cannot, therefore, introduce subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC).

Further, since Claim 1 in the granted version was not

confined at all to a device comprising a coating agent chamber, the amended claim does not extend the protection conferred to the patent in suit (Article 123(3) EPC).

- 3.1.2 The Respondents objected under Article 84 EPC to the definition of the chamber by means of the "roll face" which was the surface of the size press roll and, hence, not part of the coating device and, further, to the optional feature "possible lateral seals".

The Board, however, accepts the Appellant's submission that the size-press roll is part of the coating device. The wording "coating device for coating a size-press roll" in the present context merely describes the device when it is in action, i.e. that first of all a coating had to be formed on the size-press roll before it is then transferred to the surface of the travelling paper or board.

Concerning optional features in general, the Board has no objections as long as they do not render a claim unclear. In the present case, the term "possible lateral seals" is, in the Board's judgment, perfectly clear in that it simply means that lateral seals may be present or not.

- 3.1.3 For these reasons, the Board finds that Claim 1 complies with the requirements of Articles 84 and 123(2), (3) EPC as do Claims 2 to 8 against which no objections were raised under these articles.

3.2 Novelty

- 3.2.1 According to the Respondents, document (15) disclosed a

coating device comprising a tubular and hence rigid bar having a diameter of 20 to 200 mm and comprising a closed coating agent chamber placed before the coating bar (column 2, lines 49 to 62, column 3, lines 19 to 22, column 4, lines 5 to 8 and Figure 1). Since document (15) was silent about the kind of surface of the coating bar, so the Respondents argued, any skilled reader would interpret document (15) as disclosing a smooth coating bar. Consequently, the teaching of document (15) anticipated the subject-matter of Claim 1.

The Board does not, however, share this opinion. As indicated above at 3.1.2, the claimed device is defined, *inter alia*, by a roll face (4,5), forming part of a size-press roll. Such a roll face is totally absent in the coating device of document (15). Instead, the known device directly coats the paper web or board which, consequently, forms part of the coating agent chamber (see Figure 1).

Apart from this, the Board does not accept the Respondents' arguments concerning the disclosure of "smooth". In a situation as is dealt with in document (15), smooth, grooved and wire-wound rods are used depending on the circumstances and according to a skilled person's common general knowledge. While smooth rods have the advantage of long life and applicability of low coating weights, wire-wound rods are used where comparatively heavy deposits of coating are required (see document (16), pages 84 to 85). Other advantages of wire-wound rods can be seen from document (13) (page 1065, left-hand column to page 1066, left-hand column). Hence, a person skilled in the art cannot unambiguously and directly derive a disclosure of

smooth rods from document (15) merely from the fact that nothing at all in this respect is mentioned.

The subject-matter of Claim 1 of the second auxiliary request is, therefore, not disclosed in document (15).

3.2.2 Claim 1 as it now stands has already been filed with the Appellant's statement of Ground of Appeal and objected to by the Respondents in writing as being anticipated by document (11). The Respondents did not, however, show whether or not the coating agent chamber disclosed in document (11) comprises a front wall within the meaning of the patent in suit. Since such a front wall is neither mentioned in the description of document (11) nor discernible from its figures without making further, and arbitrary, presumptions, the claimed subject-matter is not anticipated by this document.

3.2.3 No other prior art document has been cited in respect of novelty of the subject-matter as claimed in accordance with the second auxiliary request nor is it apparent that said subject matter was anticipated by anyone of the other citations.

Therefore, it is decided that the coating device of Claim 1 of the second auxiliary request is novel. Dependent Claims 2 to 8 are directed to specific embodiments of the subject-matter of Claim 1. These embodiments are, therefore, also novel.

4. *Procedural matters*

In the present case the decision under appeal has been based solely on the ground of lack of novelty. Although

this ground has been overcome by the amendments made to the claims according to the second auxiliary request, it still has to be assessed whether these claims satisfy the other requirements of the EPC, in particular whether an inventive step is involved.

During the oral proceedings before the Appeal Board, the Appellant, contrary to his submission in the Grounds of Appeal, requested for the first time that a final decision be made by the Board instead of remitting the case to the Opposition Division for evaluation of inventive step. The Respondents also supported this request.

However, it is not normally the function of the Appeal Board to consider and decide upon questions which were raised for the first time during the appeal proceedings (see T 611/90, OJ EPO 1993, 50, reasons No. 3; and unpublished T 152/93 of 21 March 95, reasons No. 6.2). Instead, according to the Enlarged Board of Appeal, the main purpose of appeal proceedings is to give the losing party the opportunity to challenge the decision of the Opposition Division (see G 9/91, OJ EPO 1993, 408, point 18 of the reasons). Taking into account that there was no assessment of inventive step at all during the written appeal proceedings, the Board considers it appropriate to exercise its discretion under Article 111(1) EPC to refer the case back to the Opposition Division for further prosecution.

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 proceed with the opposition proceedings on the basis of the second auxiliary request.

The Registrar:

The Chairman:

G. Rauh

P. Krasa