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Datasheet for the decision of 7 February 2017

Case Number: T 0747/14 - 3.2.03

Application Number: 03816537.9

Publication Number: 1608925

IPC: F26B13/28, D21F3/02

Language of the proceedings: EN

Title of invention:
A PRESS APPARATUS FOR REMOVING WATER FROM A WEB

Patent Proprietor:
PMT Italia S.p.A.

Opponent:
Andritz Küsters GmbH

Headword:

Relevant legal provisions:
EPC Art. 54(1), 56
RPBA Art. 13(1), 13(3)

Keyword:

Decisions cited:

Catchword:

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Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0747/14 - 3.2.03

D E C I S I O N
of Technical Board of Appeal 3.2.03
of 7 February 2017

Appellant: (Opponent)	Andritz Küsters GmbH Eduard-Küsters-Strasse 1 47805 Krefeld (DE)
Representative:	Henseler, Daniela Sparing Röhl Henseler Patentanwälte Rethelstrasse 123 40237 Düsseldorf (DE)
Respondent: (Patent Proprietor)	PMT Italia S.p.A. Via Martiri del XXI, 76 10064 Pinerolo (IT)
Representative:	Lang, Christian LangPatent Anwaltskanzlei IP Law Firm Rosenheimer Straße 139 81671 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 5 February 2014 rejecting the opposition filed against European patent No. 1608925 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	G. Ashley
Members:	Y. Jest
	E. Kossonakou

Summary of Facts and Submissions

I. The appeal lies from the decision of the opposition division, posted on 5 February 2014, rejecting the opposition against European patent no. 1608925.

The opponent (hereinafter the appellant) filed a notice of appeal on 28 March 2014 and paid the fee on the same day.
The grounds of appeal were filed on 7 May 2014.

II. In its reply dated 23 September 2014 the patentee (hereinafter the respondent) requested that the appeal be dismissed or subsidiarily that the patent be maintained in amended form on the basis of the amended set of claims of a first auxiliary request.

III. The board of appeal expressed its provisional opinion of the case in a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), dated 20 October 2016. The board indicated therein *inter alia* that the amendment made to claim 1 of the first auxiliary request, namely the addition of the sole features of dependent claim 12 as granted into claim 1 as granted, thus without the features of dependent claim 11 upon which claim 12 was directly dependent, appeared potentially to contain added subject-matter and therefore to contravene the requirements of Article 123 EPC.

IV. With letter dated 9 January 2017 the respondent informed the board that it would not be attending the oral proceedings. It did not file any requests or observations directed to the issues to be decided.

With letter dated 31 January 2017 the respondent submitted additional observations regarding the issues of novelty and inventive step of the subject-matter of claim 1 as granted and filed a new and second auxiliary request.

V. Both the appellant and the respondent - contrary to its intention as communicated to the board with letter dated 9 January 2017 - attended the oral proceedings held on 7 February 2017.

VI. During the oral proceedings the parties made the following requests:

The appellant requested that the decision under appeal be set aside and that the European patent No. 1608925 be revoked.

The respondent requested that the appeal be dismissed and that the patent be maintained as granted (main request), subsidiarily that the patent be maintained on the basis of the set of claims according to the first auxiliary request filed during the oral proceedings in replacement of the then existing one, which was accordingly withdrawn, or according to the second auxiliary request filed with letter dated 31 January 2017.

VII. The set of claims as granted (main request) comprises an independent device-claim, claim 1, and an independent corresponding method-claim (claim 18 of the main request, claim 17 of auxiliary request 1, and claim 18 of auxiliary request 2).
The parties agreed that the results found for claim 1 fully applied to the method-claim and submitted therefore no additional or specific argumentation with

regard to the claimed method. There is thus no need to repeat the wording of the method claims of the main, first and second auxiliary requests (claims 18, 17 and 18 respectively).

Claim 1 of the three requests reads:

(a) Main request

"A press apparatus (10) for removing water from a web (W), said apparatus (10) comprising a rotatable roll (12) defining a peripheral surface (14), an elongate shoe (16) having a curved surface (18) which cooperates with said peripheral surface (14) of said roll (12) for defining therebetween a nip (N) for the passage therethrough of the web (W), the arrangement being such that when the web (W) extends through said nip (N), water is pressed from the web (W), and a blanket (20) disposed between said curved surface (18) of said shoe (16) and the web (W) for supporting the web (W) during said passage of the web (W) through said nip (N), said blanket (20) enclosing said shoe (16), said roll (12) being rotatable about a longitudinal axis (22); said roll (12) including:
a first and a second side (24, 26), said peripheral surface (14) extending between said first and said second side (24, 26) of said roll (12),
characterised in that
said blanket (20) has a diameter within a range 500mm to 875mm; said curved surface (18) of said shoe (16) have a machine direction (MD) length (L) within a range 40mm to 130mm."

(b) Auxiliary request 1

"A press apparatus ...
[having all the features of the preamble portion of claim 1 of the main request]...;
said blanket (20) has a first and a second edge (30, 32), a first distance (d1) between said first and said second edge (30,32) of said blanket (20) being greater than a second distance (d2) between said first and said second side (24,26) of said roll (12),
an axle (34) defining a first and a second journal (36,38), said second journal (38) being spaced axially relative to said first journal (38);
characterised in that
the apparatus further includes
a first head (40) rotatably connected to said first journal (36);
a second head (42) rotatably connected to said second journal (38);
said first head defining a periphery (44) which cooperates with said first edge (30) of said blanket (20);
said second head (42) defining a further periphery (46) which cooperates with said second edge (32) of said blanket (20) such that when said heads (40,42) are rotated about said journals (36, 38), said blanket (20) slides over said curved surface (18) of said shoe (16) so that said blanket (20) and said heads (40, 42) define an enclosure (48), said shoe (16) being sealed within said enclosure (48),
...[followed by the features of the characterising portion of claim 1 of the main request]."

(c) Auxiliary request 2

"A press apparatus ...
[having all the features of claim 1 of the main request]...;
said press apparatus (10) having gages (G) comparable with standard roll press gages so that said press apparatus (10) can easily fit on conventional roll press frames without any need for a major rebuild."

VIII. The appellant has cited *inter alia* the following documents:

D7: DE-A-197 02 575
D9: DE-A-196 54 197

IX. The arguments presented by the appellant can be summarised as follows:

(a) Main request

(i) Novelty - D7

The press apparatus according to D7 discloses embodiments (figures 9 to 11) with three or four nips A, B, C, D formed by roll press (62) or shoe presses (52,60,70), whereby the shoe presses illustrated by closed diameters in the figures are inevitably closed shoe presses. The belt passing through nips A, C, D and supported by a pair of rolls located on each side of the shoe press represents the water absorbing felt supporting the paper web through the nips and not the "open" blankets of the shoe presses.
The person skilled in the art is further taught by D7 (column 7, lines 59 to 68) that it is in principle and fundamentally ("grundsätzlich") possible to replace a

conventional roll press by a shoe press. Such a shoe press is of smaller diameter, e.g. of 600 mm, has a linear force smaller than 150 kN/m and can easily be installed in the existing press arrangement.
In the embodiment illustrated in figure 11 such a shoe press can replace the roll press at nip B or the roll press at nip D. The maximum pressure at nip B is comprised between 8 and 20 bar (column 7, lines 39 to 45) and between 30 and 100 bar at nip D, because it is substantially the same as for the pressure at nip C (column 7, lines 52 to 55).
By applying a well-known method for calculation of the nip length, based on predetermined values of the linear force (for instance 20 kN/m and 30 kN/m) and maximum pressure (for instance 8, 10 and 15 bar) in the nip of a shoe press, as set out in annex 1 of the appellant's letter dated 22 December 2016, the person skilled in the art arrives at a range of between 26,7 mm and 75 mm for the value of the length of the curved surface of said shoe press in machine direction.
The shoe press replacing the roll press according to the teaching of D7 therefore discloses all the features of claim 1.

(ii) Inventive step

Should the claimed press apparatus be distinguished from D7 by the feature defining the range for the shoe length, then the objective problem consists in defining the dimension of the shoe press to replace the roll press of D7, that is to determine the length of the curved surface of the shoe of the shoe press having a blanket diameter of about 600 mm and defining a nip subjected to a linear force about 150 kN/m and a maximum pressure of 100 bar.

The person skilled in the art would consider D9. The fact that the shoe press of the example of the invention of D9 is interacting with a heating roll of large diameter is not relevant, since the invention of D9 as defined by claims 1 to 3 is not limited to this embodiment (this merely being the subject of dependent claim 4). The size of the counter roll interacting with the press shoe does not determine the dimensions of the shoe, although it may have a major influence on the degree of curvature of its surface.
D9 discloses a relation between the linear force, the maximum pressure and the length of the curved surface for a shoe press, namely a length of the curved surface of the press shoe comprised between 80 and 120 mm, a maximum pressure in the range of 2,8 and 4 MPa (28 to 40 bar) and a linear force comprised between 120 and 170 kN/m.
The person skilled in the art, noting that the values given in D9 for the maximum pressure and for the linear force lie within the range of those defined for the shoe press of D7, would apply the teaching of D9 to the shoe disclosed by D7 by selecting the same range for the length of the curved surface of the shoe of D9, namely 80 to 120 mm. The person skilled in the art thus arrives in an obvious manner at the press apparatus defined in claim 1.

(b) First and second auxiliary requests - Admissibility

(i) First auxiliary request

This late-filed request replacing the former first auxiliary request should have been filed earlier in response to the obvious deficiencies noted by the board in its provisional opinion. It should thus not be admitted. If admitted, the oral proceedings should be

postponed so as to give the appellant sufficient time for preparing its case in light of the large number of added features.

(ii) Second auxiliary request

This request is also late-filed and the feature added to claim 1 coming from the description *a priori* contravenes the requirements of articles 84, 123(2) EPC and obviously cannot overcome the deficiency of lack of inventive step.
This request should therefore not be admitted.

X. The respondent submitted essentially the following arguments:

(a) Main request

(i) Novelty

The press apparatus of D7 discloses a shoe press 52 with nip A having a length of the curved surface of the shoe comprised between 200 and 350 mm (column 6, lines 57 to 60), thus significantly larger than the claimed range of 40 to 130 mm.
In this respect it should be noted that D7 explicitly refers to elongated nips for the shoe press (claim 31 and column 3, lines 22 to 26). This general teaching thus concerns also the shoe press that replaces a roll press as indicated in the description, column 7, last paragraph (lines 59 to 68); this paragraph is however silent about the value of shoe length. The person skilled in the art has no other basis in D7 for determining the shoe length.
Concerning the calculation method used by the appellant for determining the shoe length as a function of the

roll diameter, the pressure and the linear force provided in the nip, it is clear for the skilled person that it applies only to roll presses and cannot be used for shoe presses. If this method was used for calculating the shoe length for shoe presses replacing the roll presses defined in D7, the values obtained would lie between 4 and 3000 mm, which confirms that the calculation method is not suited for determining the shoe length.

A further distinction is that the shoe press of D7 is an open shoe press, as confirmed by the representation of the shoe press 52 (shoe 54) in figures 9 to 11, wherein the blanket of the shoe press 52 is shown by the line (without reference sign) extending sideways therefrom, and being supported by two separate pulleys and not by the substantially round and closed line 56 which represents the shoe press unit ("Schuhpresseinheit", column 8, line 37).
The feature of claim 1 requiring that the blanket encloses the shoe and, as a matter of consequence, the feature requiring the blanket to have a diameter within the range of 500 to 875 mm also differ from the state of the art disclosed in D7.

The claimed apparatus differing by three features from D7 is thus new.

(ii) Inventive step

The claimed apparatus defines how to replace a conventional roll couple press by a shoe press, i.e. by an enclosed extended nip press (ENP), as acknowledged by the feature of claim 1 requiring the blanket to enclose the shoe.

It is clear for the skilled person that both D7 and D9 describe open and not enclosed ENPs, so that an apparatus resulting from the combination of D7 and D9 would not fulfil the feature requiring the blanket to enclose the shoe.
Furthermore, in accordance with the grounds indicated by the opposition division in the impugned decision, the skilled person would not have considered D9 because the apparatus disclosed therein concerned a large heating roll as counter roll for the shoe roll.
The subject-matter of claim 1 therefore involves an inventive step.

(b) First and second auxiliary requests - Admissibility

(i) First auxiliary request

Claim 1 of the first auxiliary request, which is defined by the combined features of claims 1, 11 and 12 as granted, replaces claim 1 of the previous auxiliary request as filed with the reply to the appeal, which was based on claims 1 and 12 as granted. The request is filed in order to overcome the objection under Article 123(2) EPC against the previous auxiliary request now abandoned. Therefore it does not constitute a surprise and can be dealt with during the oral proceedings without postponement.
The first auxiliary request is thus to be admitted.

(ii) Second auxiliary request

The feature added to claim 1, whereby the press apparatus has gages comparable with standard roll press gages (from the description of the patent, column 12, lines 46 to 52), is clear, self-sufficient and adds a

further inventive feature to the claimed subject-matter as compared to the combination of D7 and D9.
The second auxiliary request is to be admitted.

XI. At the end of the oral proceedings held on 7 February 2017, the board pronounced its decision.

Reasons for the Decision

1. Main request

1.1 Claim 1 - Novelty

Document D7 contains two different relevant disclosures, neither of which is novelty destroying for the following reasons.

1.1.1 The first disclosure (D7A) concerns the press apparatus shown in figures 9 to 11 comprising the shoe press 52. This shoe press 52, defining a press nip A, comprises a shoe press unit 56 and a shoe 54.
According to the description, see column 2, lines 30 to 41, column 3, lines 22 to 31, column 6, lines 46 to 60,
- the diameter of the shoe press unit 56 is small, for instance 600 mm (column 3, lines 29 and 30),
- the maximum pressure in the shoe press nip A lies between 2 and 15 bar,
- the maximum linear force applied in the shoe press nip A is smaller than 300 kN/m, preferably 150 kN/m, and
- the length of the curved surface of the shoe 54 in machine direction lies between 200 and 350 mm.

The board does not share the respondent's view that the feature of the blanket enclosing the shoe is equivalent

to the limitation of the shoe press being in form of an enclosed extended nip press (ENP)).
But even if this limitation were to be defined explicitly in claim 1, it would not appear to provide a distinction over D7, because in the skilled person's view the shoe press installed in the apparatus known from D7 is implicitly an enclosed ENP for the following reasons.

By analogy with figure 6 showing a felt 24 passing through the press nip of the shoe press unit 56 (see column 5, lines 35 to 39), the line drawn in figures 9 to 11 without reference sign which passes through nip A of the shoe press unit 56 also represents the felt supporting the paper web. The blanket of the shoe press is actually of general cylindrical form as represented by the shoe press unit 56 which clearly covers shoe 54. Therefore the feature of claim 1, whereby the blanket encloses the press shoe, is also disclosed in D7.

This first disclosed embodiment of D7A thus shows all the features of claim 1 except the characterising feature defining that the curved surface of the shoe has a length of 40 to 130 mm in the machine direction.

1.1.2 The second disclosure (D7B) is based on the text at column 7, last paragraph (lines 59 to 68).

The person skilled in the art is taught therein that it is in principle and fundamentally ("grundsätzlich") possible to replace a conventional roll press by a shoe press in a press apparatus.
Such a shoe press is of smaller diameter, for instance 600 mm, has a linear force smaller than 150 kN/m and can easily be installed in an existing press arrangement. In the embodiment illustrated in figure 11

such a shoe press can replace the roll press at nip B or the roll press at nip D. The maximum pressure at nip B lies between 8 and 20 bar, see also column 7, lines 39 to 45, and at nip D between 30 and 100 bar, since the pressure is defined as being substantially the same pressure as at nip C (see column 7, lines 52 to 55).

Concerning the last feature of claim 1 defining the length of the curved surface of the shoe, the respondent challenged the accuracy of the calculating method applied by the appellant in annex 1, as submitted with the appellant's letter dated 22 December 2016. The respondent argued that the values obtained for the shoe length for shoe presses replacing the roll presses as defined in D7B by applying this calculation would lie between 4 and 3000 mm. Such a broad range confirms that the calculation method is not appropriate for shoe presses.

The appellant has not provided evidence that this calculating method is generally acknowledged in the field as being a method clearly suited for calculating the shoe length of a shoe press as a function of the linear force and the maximum pressure in the nip of the press.

In conclusion, the board is not convinced that the last feature is implicit for the person skilled in the art in the sense that it can easily be determined by a generally recognised calculation.

The press apparatus of claim 1 thus differs from the state of the art D7B by the last characterising feature, which requires that the curved surface of said shoe has a machine direction length within a range 40 to 130 mm.

1.1.3 Hence, the press apparatus of claim 1 is new (Article 54(1) EPC).

1.2 Claim 1 - Inventive step

1.2.1 The closest prior art is represented by the embodiment D7B of D7, which shows all the features of claim 1 except the last one defining the range of 40 to 130 mm for the length of the curved surface of said shoe in the machine direction.

1.2.2 The board considers that the objective technical problem as defined in the impugned decision by the opposition division, namely decreasing the cost of the known press, is not objectively derivable from the distinguishing feature.
Neither does the board agree with the respondent's definition, namely providing the same drying effect but with less effort by using a shoe press without having to change substantially the press arrangement.
These two definitions are not adequate because they do not take into account that the shoe press is already part of the press apparatus according to the closest state of the art D7B and because they are not based on the single distinguishing feature, namely the range for the shoe length.

The board considers that the objective problem for the person skilled in the art is to complete the design of the shoe press used in replacement of a roll press as known from D7B, and more specifically to determine the appropriate length of the curved surface of the shoe, on the basis of the criteria disclosed in column 7, last paragraph, of D7.

It is worth noting here that D7 does not teach the person skilled in the art to select large press shoes. The expression "eine Schuhpresse mit einem in Bahnlaufrichtung verlängerten Preßspalt" (column 3, lines 22 to 26 and claim 31 of D7) referred to by the respondent is to be understood as meaning that the press nip of a shoe press replacing a roll press is longer than the press nip of the latter. It does not teach the use of a shoe press having a large shoe in the sense of having an elongated curved surface which is significantly longer than that usually used in press shoes.

1.2.3 The skilled person would find instruction in document D9 for determining the length of the curved surface of a shoe of a shoe press defining a press nip subjected to a linear force about 120 to 170 kN/m and a maximum pressure of 100 bar (as is the case for D7B). When comparing the drawings in figures 1 to 3 of D9, it appears for the person skilled in the art that for a substantially constant linear force in the shoe press nip the length of the shoe decreases when the pressure increases. For pressures between 2,8 and 3,8 MPa (28 and 38 bar) the length of the shoe lies in the range of 80 to 120 mm, see also claim 3 of D9 wherein the length is defined as being between 60 and 130 mm.
The fact that in the detailed embodiment of the shoe press of D9, as described at column 4, lines 7 to 29, the counter roll cooperating with the press shoe has a large diameter and could be in the form of a heating roll (see dependent claim 4) is not relevant for the following reasons. The invention of D9 as defined by claims 1 to 3 is not limited to such a particular embodiment of the counter roll. Furthermore, the size of the counter roll interacting with the press shoe does not determine the dimensions of the shoe, although

it may have a major influence on the degree of curvature of its surface. Moreover, claim 1 of the main request is completely silent as to the type and dimensions of the counter roll defining together with the press shoe the press nip; a large and/or heating roll is not excluded by the wording of claim 1 nor is it in the description.

After having noted that the values given in D9 for the maximum pressure and for the linear force lie within the range of those defined for the shoe press of D7B, the person skilled in the art would apply the teaching of D9 to the shoe according to D7B by selecting the same range for the length of the curved surface of the shoe of D9, namely 80 to 120 mm. In doing so he arrives in an obvious manner at the press apparatus defined in claim 1.

1.2.4 The press apparatus according to claim 1 of the main request therefore does not fulfil the requirements of Articles 52(1) and 56 EPC.

2. First auxiliary request

2.1 The first auxiliary request was filed during the oral proceedings in reaction to the objection raised under Article 123(2) EPC against the previous auxiliary request filed with the reply to the appeal grounds, now abandoned.
This objection was based on the fact that claim 1 of the previous auxiliary request, which was based on the combination of claims 1 and 12 as granted, did not comprise the features of claim 11 as granted upon which claim 12 was dependent.

2.2 However the board notes:
- that the respondent filed with letter of 31 January 2017, thus in reply to the communication setting out the board's provisional opinion, a second auxiliary request comprising an amended claim 1 based on the combination of the features of claim 1 as granted together with a feature (gages) taken solely from the description, and
- that said second auxiliary request, which was thus directed to a completely different aspect, constitutes no attempt to remedy to the objection under Article 123(2) EPC raised by the board against the auxiliary request submitted previously.

2.3 When preparing for the oral proceedings, the appellant had thus no reason to envisage that the deficient claim 1 of the auxiliary request would be replaced during oral proceedings by a new claim including all the features of claims 1, 11 and 12 as granted.
Such a claim should have been submitted after the communication of the provisional opinion of the board or at the latest together with the second auxiliary request (on 31 January 2017).

2.4 Claim 1 of the first auxiliary request comprises the large number of technical features of dependent claims 11 and 12 as granted.
The board agrees that the appellant could not be expected to deal with the issue of inventive step for this late-filed request, especially when considering the large number of constructional features contained in claims 11 and 12 as granted, so that an interruption of the oral proceedings would not suffice for preparing its case.

2.5 The board is of the opinion that the first auxiliary request should have been filed in advance and not during the oral proceedings.
Should the request have been admitted into the proceedings, the board would have had to grant the appellant's request for adjournment of the oral proceedings.

2.6 The board thus, pursuant to Article 13(3) RPBA, arrives at the conclusion not to admit the first auxiliary request filed during oral proceedings in replacement of the auxiliary request filed with its reply to the appeal.

3. Second auxiliary request

The second auxiliary request was filed with letter of 31 January 2017.
Any amendment after the respondent filed its reply may be considered at the board's discretion pursuant to Article 13(1) RPBA.
The feature, which was added to claim 1 as granted for forming claim 1 of the second auxiliary request and which defines that the press apparatus has gages comparable with standard roll press gages, comes from the description (column 12, lines 46 to 52).

This added feature is considered to define a result to be achieved rather than a clear limitation or restriction of the claimed subject-matter (Articles 84 and 56EPC). Furthermore, the added feature, which is explicitly disclosed in paragraph [0105] of the patent, has been isolated from a large number of properties and constructional features of the shoe press defined in paragraphs [0100] to [0105]. The feature relative to the gages therefore appears to be the result of a

special and detailed embodiment, wherein the defined features act in cooperation to produce the desired press.
The inclusion of the sole added feature in independent claim 1 without additional *prima facie* essential constructional detailed features characterising the embodiment *a priori* constitutes an undisclosed generalisation contravening the requirements of Article 123(2) EPC.

In summary, claim 1 of the late-filed second auxiliary request is *a priori* objectionable under Articles 84 and 123(2) EPC.
By exercising its discretion under Article 13(1) RPBA, the board decides therefore not to admit the second auxiliary request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

K. Boelicke G. Ashley

Decision electronically authenticated