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D E C I S I O N
of 6 September 2001

Case Number: T 0078/99 - 3.2.2

Application Number: 91850197.4

Publication Number: 0471655

IPC: D21F 5/02

Language of the proceedings: EN

Title of invention:

Heatable roll

Patentee:

VALMET PAPER MACHINERY INC.

Opponent:

Eduard Küsters Maschinenfabrik GmbH & Co. KG

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (no)"

Decisions cited:

-

Catchword:

-



Case Number: T 0078/99 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 6 September 2001

Appellant:
(Opponent)

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Respondent:
(Proprietor of the patent)

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Representative:

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Decision under appeal:

Decision of the Opposition Division of the
European Patent Office posted 18 November 1998
rejecting the opposition filed against European
patent No. 0 471 655 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: W. D. Weiss
Members: D. Valle
R. T. Menapace

Summary of Facts and Submissions

- I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division to reject the opposition.
- II. The Opposition Division held that the grounds brought forward by the opponent on the basis of lack of inventive step (Article 100(a) EPC) were not sufficient for revoking the patent.
- III. On 6 August 2001 - during the appeal proceedings - the appellant filed the new documents:
- D13: F. Wagner, "Die elektrische Walzenheizung",
Zeitschrift "Die elektrische Ausrüstung", No. 2,
20 April 1966, and:
- D14: DE - U - 1 675 284,
- arguing that they were more relevant than the documents brought forward before the Opposition Division and maintained its objection of lack of inventive step.
- IV. Following an auxiliary request of both parties, oral proceedings were held on 6 September 2001. With letter of 1 August 2001 the respondent withdrew its request for oral proceedings and did not attend them.
- V. At the end of the oral proceedings the appellant requested that the decision under appeal be set aside and that the patent be revoked.
- VI. The final requests of the respondent as contained in the letter of 1 August 2001 were that:

- the patent be maintained as granted (main request) or:
- be maintained in amended form with the documents filed with letter dated 28 September 1999, marked "auxiliary request 1" (auxiliary request).

VII. Claim 1 as granted reads as follows:

"Heatable roll, in particular a press roll or calender roll (10) in a paper or board machine, comprising a hollow, tubular roll mantle (12), which is provided with heating means (1, 2, 3,; 21) for heating of the roll mantle, said heating means comprising ducts (1; 21) or equivalent, which have been formed into the roll mantle (12) and extend from end to end in the roll, and electric resistors (2) fitted in said ducts (1; 21) and connected to a voltage source to heat said electric resistors inside the body material of the roll mantle (12), characterized in that the ducts comprise holes (1) which have been formed by drilling and which extend from the one end of the roll mantle (12) to the other end, that the electric resistors (2) in said holes (1) of the roll mantle (12) have been divided into zones (Z_1, Z_2, Z_3, Z_4) in the axial direction of the roll (10), and that currents of different intensities are arranged to be fed into different zones (Z_1, Z_2, Z_3, Z_4) to produce different heating effects in the different zones of the roll (10)."

VIII. Claim 1 of the auxiliary request, as submitted with letter of 28 September 1999, reads as follows (the modifications with respect to the main request are underlined for better understanding):

"Heatable variable crown press roll or calender roll (10) in a paper or board machine, comprising a hollow, tubular roll mantle (12), which is provided with heating means (1, 2, 3, 21) for heating of the roll mantle, said heating means comprising ducts (1; 21) or equivalent, which have been formed into the roll mantle (12) and extend from end to end in the roll, and electric resistors (2) fitted in said ducts (1; 21) and connected to a voltage source to heat said electric resistors inside the body material of the roll mantle (12) said roll being provided with a non-revolving axle (11) arranged inside the roll mantle (12) and with crown variation means (14) acting upon the inner face of the roll mantle (12), characterized in that the ducts comprise holes (1) which have been formed by drilling and which extend from the one end of the roll mantle (12) to the other end, that the electric resistors (2) in said holes (1) of the roll mantle (12) have been divided into zones (Z_1, Z_2, Z_3, Z_4) in the axial direction of the roll (10), and that currents of different intensities are arranged to be fed into different zones (Z_1, Z_2, Z_3, Z_4) to produce different heating effects in the different zones of the roll (10)."

IX. The appellant argued essentially as follows:

The subject-matter of claim 1 of the main and auxiliary request did not involve at least an inventive step.

Document D14, claim 1, description, page 1, last paragraph and drawing disclosed a heatable roll with a hollow tubular roll mantle having heating means comprising ducts and electrical heating elements whereby the electrical heating elements had been

divided into independently controlled zones.

Document D13 was essentially equivalent to document D14, see: page 1, fourth paragraph; Figures 1 and 2; page 1, right column, second paragraph; page 3, third paragraph; page 1, right column, second paragraph and page 3, right column, paragraphs 2 and 3.

The additional features of claim 1 of the auxiliary request were known "per se" and were not relevant to the purpose of the invention as disclosed in the description of the patent in suit and consisting on providing a uniform heating of the roll mantle.

Claim 1 of the auxiliary request did not comply with Article 123 EPC. The clause: "non revolving axle" in the claim did not mean the same as the clause: "stationary roll axle" of column 3, line 23 of EP - A - 471 655. The clause: "and with crown variation means ..." did not correspond to the wording of column 3, lines 27-32 of EP - A - 471 655.

- X. The respondent did not comment on the arguments brought forward by the appellant in the letter of 6 August 2001 and based on documents D13 and D14. A copy of such letter was communicated to him on 9 August 2001.

Reasons for the Decision

1. *The appeal is admissible.*
2. *Admissibility of the late filed documents*

The late filed documents D13 and D14 are introduced in

the proceedings because - as it will be apparent from the following - they are highly relevant for the case.

3. *Novelty*

As it will become apparent from the following point, claims 1 of the main and of the auxiliary request are novel because not all their features are disclosed in the opposed document of the state of the art.

4. *Inventive step*

4.1 The main request

Document D13 concerns the electrical heating of rolls and discloses a heatable roll, comprising a hollow, tubular roll mantle (Figure 1), which is provided with heating means (Längsheizrohre, Randheizrohre) which can be formed in the roll mantle (page 1, left column, penultimate paragraph: "die Beheizung der Walzen kann ... von unter der Oberfläche angebrachten peripherischen Bohrungen aus ... erfolgen) for heating of the roll mantle, said heating means comprising ducts, which extend from end to end in the roll (page 3, right column, second paragraph, line 8), and electrical resistors fitted in said ducts and connected to a voltage source to heat said electrical resistors (page 1, right column, "elektrische Anschlüsse"); implying that the electrical heating is made by means of resistors, whereby the ducts have been formed into the roll mantle and in that the ducts comprise holes which can have been formed by drilling and which extend from the one end of the roll mantle to the other end, and the electrical resistors in said holes of the roll mantle have been divided into zones in the axial

direction of the roll (page 3, right column, second and third paragraph).

The document disclosure of document D14 is equivalent to the one of D13.

Claim 1 of the main request distinguishes therefrom essentially in that currents of different intensity are arranged to be fed into different zones to produce different heating effects in the different zones of the roll. This however appears to be the more obvious realization of the differential heating by means of electric resistance.

Accordingly the subject-matter of claim 1 of the main request does not involve an inventive step having regard to documents D13 or to D14.

4.2 The auxiliary request

The additional features of the auxiliary request (variable crown, non revolving axle) are well known in the field and they do not relate to the purpose of the invention as disclosed in the description of the patent in suit, column 2, from line 24 (uniform heating, reduction of energy losses). Therefore the additional features of claim 1 of the auxiliary request do not contribute to the inventive activity of the claim.

Accordingly the subject-matter of claim 1 of the auxiliary request does not involve an inventive step.

5. *Further considerations*

Since the requests of the respondent are not allowable

on the ground of lack of inventive step, the objections based on Article 123(2) EPC against claim 1 of the auxiliary request need not be investigated.

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:

V. Commare

W. D. Weiß