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D E C I S I O N
of 1 February 2005

Case Number: T 0909/03 - 3.2.5

Application Number: 94202841.6

Publication Number: 0649730

IPC: B29D 30/30

Language of the proceedings: EN

Title of invention:

Method for adjusting a side of a strip of flexible material to a reference side and apparatus for feeding a belt strip on a rotating building drum

Patentee:

VMI EPE HOLLAND B.V.

Opponent:

Thyssen Krupp AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 83

EPC Rule 57a

Keyword:

"Substantial procedural violation (no)"

"Sufficiency of disclosure (yes)"

"Allowability of amendments (first and second auxiliary requests, yes)"

"Novelty (main request and first auxiliary request, no; second auxiliary request, yes)"

"Inventive step (second auxiliary request, yes)"

Decisions cited:

T 0937/00, T 0181/02

Catchword:

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Case Number: T 0909/03 - 3.2.5

D E C I S I O N
of the Technical Board of Appeal 3.2.5
of 1 February 2005

Appellant I:
(Opponent)

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Decision under appeal:

Interlocutory decision of the Opposition
Division of the European Patent Office posted
18 July 2003 concerning maintenance of European
patent No. 0649730 in amended form.

Composition of the Board:

Chairman: W. Moser
Members: P. E. Michel
H. M. Schram
W. Widmeier
C. Holtz

Summary of Facts and Submissions

I. Appellant I (opponent) and appellant II (patentee) lodged appeals against the interlocutory decision of the Opposition Division maintaining European patent No. 0 649 730 in amended form.

In the decision under appeal, it was held that the grounds of opposition under Article 100(a) EPC (lack of novelty, Article 54 EPC, and lack of inventive step, Article 56 EPC) and Article 100(b) EPC did not prejudice the maintenance of the patent as amended.

II. Oral proceedings were held before the Board of Appeal on 1 February 2005.

III. Appellant I requested that the decision under appeal be set aside and the European Patent No. 0 649 730 be revoked.

Appellant II requested that the decision under appeal be set aside and that the case be remitted to the Opposition Division due to a substantial procedural violation and that the appeal fee be refunded if the request were held allowable, otherwise that the patent be maintained on the basis of the following documents:

- (i) claims 1 to 20 as granted as main request; or
- (ii) claims 1 to 35 filed as first auxiliary request on 29 December 2004; or
- (iii) claims 1 to 19 filed as second auxiliary request on 29 December 2004; or
- (iv) claims 1 to 16 filed as third auxiliary request on 29 December 2004.

As fourth auxiliary request, appellant II requested that the appeal of appellant I be dismissed and that the patent be maintained.

IV. Claims 1 and 12 of the patent as granted read as follows:

"1. Method for feeding a belt strip (17) to a rotating building drum (1), said method comprising the steps of:
a) unwinding belt material (13) having opposite longitudinal sides from a supply reel (2, 3),
b) conveying the belt material (13) in a direction of conveyance (30) at a velocity of conveyance from the supply reel (2, 3) to a fixing element by conveying means, said longitudinal sides of the belt material (13) being substantially parallel to the direction of conveyance (30), said conveying means being spaced from the fixing element forming a transition (15) between the conveying means and the fixing elements, said conveying means comprising a first conveyor (6, 6'),
c) cutting the belt material (13) into a belt strip (17) by cutting means (9, 9') placed above the conveying means, said belt strip (17) being elongated and having two long circumferential sides (37, 38) and two short circumferential sides (35, 39), said belt strip (17) comprising:
a central rectangular part (32) having two long sides and an imaginary centre line (41), the direction of conveyance (30) of the first conveyor (6, 6') being parallel to the imaginary centre line (41),
a triangular leading end (33), situated downstream, the one short, leading circumferential side (35) of the strip (17) being formed by the hypotenuse of the

leading end (33) and a short side (36) of the leading end (33) lying in the extension of one (37) of the long sides (37, 38) of the central part (32), the hypotenuse (35) and the short side (36) of the leading end (32) enclose an acute angle and the one long side (37) of the central part (32) and the short side (36) of the leading end (33) forming the one long circumferential side of the strip (17),

a triangular trailing end (34), situated upstream, the other short, trailing circumferential side (39) of the strip (17) being formed by the hypotenuse of the trailing end (34) and a short side (40) of the trailing end (34) lying in the extension of the other side (38) of the central part (32), the hypotenuse (39) and the short side (40) of the trailing end (34) enclosing an acute angle and the other long side (38) of the central part (32) and the short side (40) of the trailing end (34) forming the other long circumferential side of the strip (17),

d) conveying the belt strip (17) over the transition (15) whereby successively adjacent sections of the belt strip (17) are conveyed over the transition (15),

e) determining the shape of at least one side of the belt strip (17) after the step of cutting the belt material (13) during conveyance of the belt strip (17) over the transition (15) between the conveying means and the fixing element, said step of determining being effected by determining the shape of the sections of the at least one side,

f) comparing the shape of the sections of the at least one side of the belt strip (17) with a shape of corresponding sections of a reference side,

g) adjusting the shape of the sections of the at least one side of the belt strip (17) to the shape of the

corresponding sections of the reference side during conveyance of the belt strip sections over the transition (15), by moving the sections of the belt strip (17) relative to the fixing element transverse to the direction of conveyance (30), and
h) fixing the thus adjusted shape of the sections of the at least one side of the belt strip (17) on the fixing element (7) by fixing means (18)."

"12. Belt strip feeding apparatus for feeding a belt strip (17) to a rotating building drum (1), which feeding apparatus comprises:
a supply reel (2, 3) for containing belt material (13), means (4, 5) for unwinding belt material (13) from the supply reel (2, 3),
conveying means for conveying the unwound belt material (13) to the building drum (1), successively comprising a roller conveyor (6, 6'), a conveyor belt (7, 7') and a mounting conveyor (8, 8') for mounting the belt strip (17) onto the building drum (1), said roller conveyor (6, 6') being spaced from the conveyor belt (7, 7') forming a transition (15) between the roller conveyor (6, 6') and the conveyor belt (7, 7'), said roller conveyor (6, 6') being movable in a direction transverse to its direction of conveyance (30),
cutting means (9, 9') placed above the roller conveyor (6, 6') for cutting the belt material (13) into a belt strip (17), such that the belt strip (17) is elongated and has two long circumferential sides and two short circumferential sides (35, 39) and that the strip comprises:

a central rectangular part (32) having two long sides (37, 38) and an imaginary centre line (41), the

direction of conveyance (30) of the roller conveyor (6, 6') being parallel to the imaginary centre line (41), a triangular leading end (33), situated downstream, the one short, leading circumferential side (35) of the strip (17) being formed by the hypotenuse of the leading end (33) and a short side (36) of the leading end (33) lying in the extension of one (37) of the long sides (37, 38) of the central part (32), the hypotenuse (35) and the short side (36) of the leading end (33) enclosing an acute angle and the one long side (37) of the central part (32) and the short side (36) of the leading end (33) forming the one long circumferential side of the strip (17), a triangular trailing end (34), situated upstream, the other short, trailing circumferential side (39) of the strip (17) being formed by the hypotenuse of the trailing end (34) and a short side (40) of the trailing end (34) lying in the extension of the other side (38) of the central part (32), the hypotenuse (39) and the short side (40) of the trailing end (34) enclosing an acute angle and the other long side (38) of the central part (32) and the short side (40) of the trailing end (34) forming the other long circumferential side of the strip (17), determining means (10) for determining the shape of at least one side of the strip (17), said determining means (10) being positioned at the transition (15) from the roller conveyor (6) to the conveyor belt (7), comparison means for comparing the shape as determined of the at least one side to the shape of a reference side, adjustment means controlled by control means (24) for adjusting the shape as determined of the at least one side to the shape of the reference side, depending on

the outcome of the comparison, by moving the roller conveyor (6) in a direction transverse to its direction of conveyance (30), and fixing means provided on the conveyor belt (7) for fixing the adjusted belt strip (17) on the conveyor belt (7)."

Claim 1 of the first auxiliary request differs from claim 1 of the main request in that:

the phrase "storing said shape in a first memory" is added to feature e) and in that feature f) is amended so as to read (additions in italics):

"f) comparing the shape of the sections of the at least one side of the belt strip (17) *stored in the first memory* with a shape of corresponding sections of a reference side *which has been stored in a second memory*".

Claim 12 of the first auxiliary request differs from claim 12 of the main request in that the features of claim 13 as granted are introduced, that is,

"wherein the comparison means comprise a first memory for storing the shape as determined of the at least one side of the strip (17), a second memory for storing the shape of the at least one reference side concerned, calculating means for calculating the difference between the shape as determined of the at least one side and the shape of the reference side, and an electronic unit (24) for controlling the adjusting means, depending on the calculated difference."

In addition, two new independent claims (claims 20 and 27) are introduced, also based on claims 1 and 12 as granted. Both claims include the following additional text:

"said at least one side selected from the group consisting of the short side (36) of the leading end (33), the hypotenuse (35) of the leading end (33), the hypotenuse (39) of the trailing end (34) and the short side (40) of the trailing end (34)."

The claims of the second auxiliary request are identical to claims 1 to 19 of the first auxiliary request.

The claims of the third auxiliary request are identical to claims 20 to 35 of the first auxiliary request.

- V. An allegation of a public prior use was supported by documents referred to as Anlagen 1 to 10, 10a and 11 to 22. A witness, Mr Wedekind, was heard by the Opposition Division during oral proceedings. During the present procedure, a declaration by Mr Wedekind relating to the alleged public prior use was filed by appellant I.

In addition, a declaration by Mr Regterschot, together with two brochures, referred to as annex 1 and annex 2, was filed by appellant II.

- VI. In written and oral proceedings, appellant I argued essentially as follows:

The manner of hearing the witness, Mr Wedekind, at the oral proceedings before the Opposition Division did not constitute a substantial procedural violation.

The Opposition Division correctly exercised their discretion in admitting the ground of opposition under Article 100(b) EPC into the proceedings.

The declaration of Mr Wedekind enclosed with a letter of 29 December 2004 was filed in response to the provisional opinion of the Board of Appeal and should therefore be admitted into the proceedings.

The independent claims of all requests define the belt strip in terms of the ideal strip shown in Figure 9 of the patent in suit and not that actually obtained by cutting and illustrated in Figure 10 of the patent in suit. Since the ideal strip cannot be obtained by cutting, there is no disclosure enabling the invention to be carried out.

A public prior use of a belt strip feeding apparatus took place by virtue of the delivery of an automatic belt server referred to as a GS-2-300 in 1990 to Außenhandelsbetrieb der DDR, for installation at VEB Reifenwerke Riesa. This prior use was established in the opposition proceedings on the basis of the documents referred to as Anlagen 1 to 5, 13 to 16, 21 and 23 to 25, together with the testimony of the witness, Mr Wedekind. Drawings of the machine have been supplied as Anlagen 6 to 12, 17 to 20 and 22.

Claim 12 of the main request of appellant II lacks novelty in view of the public prior use. In particular,

it is noted that, in the arrangement disclosed in the patent in suit, the determination of the shape of a side of the strip takes place in steps and that only a current value can be used for adjustment. The reference in the claim to "determining means (10) for determining the shape of at least one side of the strip (17)" must accordingly be understood in this context.

The introduction of claims 20 to 35 is not necessary in order to overcome a ground of opposition, so that the amendments of the first auxiliary request do not comply with the requirement of Rule 57a EPC, and the amendments involved in the first auxiliary request are therefore not allowable.

Claim 27 of the first auxiliary request lacks novelty. Insofar as the claim refers to one side selected from a group of sides which includes the short sides, the arguments made in respect of claim 12 of the main request also apply to claim 27 of the first auxiliary request.

Claims 1 and 12 of the second auxiliary request are not clear. In particular, the references to determining "the shape of at least one side" or "the shape of the sections of the at least one side" of the belt strip are not clear. In addition, the reference in claim 1 to "adjusting the shape of the sections of the at least one side of the belt strip (17) to the shape of the corresponding sections of the reference side" is not clear, since the shape of two sides cannot be adjusted simultaneously. Finally, the reference in claim 1 to "fixing the thus adjusted shape of the sections of the

at least one side of the belt strip" is also not clear, since only the entire width of the strip can be fixed.

Claims 1 and 12 of the second auxiliary request lack novelty. The apparatus of the patent in suit is not capable of storing the shape of a side of the strip. This feature cannot therefore distinguish the subject-matter of claims 1 and 12 from the disclosure of the prior art.

Claims 1 and 12 of the second auxiliary request lack an inventive step. It is obvious that it is desirable to store the determined values for use in the subsequent adjustment step. As stated in the brochure constituting annex 2 of the declaration by Mr Regterschot, the control system EKR 1 stores a defined value to enable adjustment to the left or right as well as a centring adjustment.

VII. In written and oral proceedings, appellant II argued essentially as follows:

The manner of hearing the witness, Mr Wedekind, at the oral proceedings before the Opposition Division constituted a substantial procedural violation. In particular, the minutes of the hearing were not available during the remainder of the oral proceedings. The period of 1¼ hours between the hearing of the witness and the resumption of the oral proceedings was insufficient to allow the preparation of arguments.

In addition, the letters from appellant I of 14 April and 2 May 2003 should not have been admitted into the proceedings before the Opposition Division.

Further, the Opposition Division should not have admitted the ground of opposition under Article 100(b) EPC at a late stage in the proceedings.

The second declaration of Mr Wedekind enclosed with a letter of 29 December 2004 should not be admitted into the proceedings before the Board of Appeal.

The person skilled in the art would not be prevented from being able to perform the invention by the fact that the independent claims of all requests define the belt strip in terms of the ideal strip shown in Figure 9 of the patent in suit.

It is necessary to prove an alleged public prior use up to the hilt. In the present case, there is insufficient evidence of the date on which the apparatus was delivered and there are inconsistencies in the evidence. A contract for the alleged sale has not been provided. The prior use of a belt strip feeding apparatus was not publicly available in view of the restricted access to the Riesa Werke.

The allegedly prior use apparatus comprises a centring device which comprises two photocells, the signal from which is supplied to an amplifier. This produces a signal which is a measure of the difference between the percentage coverage of each photocell. Thus, the shape of a side of a strip is not determined and the apparatus does not comprise determining means or comparison means as required by claim 12.

The subject-matter of claim 12 of the main request is thus novel in view of the prior art.

The amendments to the claims according to the first auxiliary request are made in order to overcome an objection of lack of novelty and thus comply with the requirement of Rule 57a EPC. It is justified to attempt to save as much of the subject-matter of the independent claims as possible, even if this involves an increase in the number of claims.

Claim 27 of the first auxiliary request is novel in view of the prior art. The prior art apparatus cannot determine the shape of the short side, since it can only operate when both sides are detected by the sensors. As stated in the Regterschot declaration, if the tip cannot be seen by the sensors, the apparatus cannot function.

Claims 1 and 12 of the second auxiliary request are clear. The references to the shape of a side should be understood as referring to successively determining the position of the at least one side, as described with reference to Figure 13 of the patent in suit. The feature "adjusting the shape of the sections of the at least one side of the belt strip" refers to the possibility of choosing an average of two sides, such as the hypotenuse and short side of the leading end.

Claims 1 and 12 of the second auxiliary request are novel. The prior art apparatus does not include a memory for storing the shape of at least one side of the strip as determined by the sensors. The sensors are

analogue sensors which supply a continuous signal representing the shape of the side being detected.

Claims 1 and 12 of the second auxiliary request involve an inventive step. There is nothing in the prior art which would suggest providing a memory for storing the shape of at least one side of the strip as determined by the sensors. This feature makes it possible to correct the shape of a strip so as to obtain the best fit, including adjusting the trailing end to match the leading end.

The subject-matter of claims 1 and 12 of the second auxiliary request thus involves an inventive step in view of the prior art.

Reasons for the Decision

1. *Alleged substantial procedural violations*

1.1 *Hearing of the witness*

It is objected by appellant II that the manner of hearing the witness, Mr Wedekind, at the oral proceedings before the Opposition Division constitutes a substantial procedural violation. As stated in the minutes of the oral proceedings before the Opposition Division, the hearing of the witness took place in the morning and the oral proceedings continued in the afternoon after an adjournment. Appellant II was present throughout the hearing of the witness and, as can be seen from the minutes of the hearing of the witness, was able to question the witness. Appellant II

knew in advance of the oral proceedings that this witness was going to be heard as well as the subject of his testimony (see Annexes to the summons to oral proceedings dated 23 August 2002).

During the oral proceedings, appellant II was given sufficient opportunity to comment on the testimony of the witness, even though the written minutes of the hearing were not available to the parties. It is not required that the other party be given a copy of the minuted testimony before questioning a witness.

1.2 *Admission of late filed material and grounds*

In addition, it is objected by appellant II that the letters of appellant I of 14 April and 2 May 2003 should not have been admitted into the proceedings before the Opposition Division, since they were filed later than one month of the oral proceedings which took place on 13 May 2003. Whilst the first of these letters merely constitutes a summary of the arguments already presented, the second letter did include documents supporting the evidence of Mr Wedekind. Similarly, the Opposition Division admitted a ground of opposition under Article 100(b) EPC into the proceedings which was not mentioned in the notice of opposition.

These are, however, matters in which the Opposition Division is entitled to exercise its discretion under Article 114(1) EPC. The Board is of the opinion that the Opposition Division correctly exercised its discretion in these matters, since the nature of the late filed facts and ground of opposition was not such that the Opposition Division and the other party could

not be expected to deal with them in the time available before the oral proceedings.

1.3 A substantial procedural violation thus did not occur during the proceedings before the Opposition Division.

2. *Late filed document*

It is submitted by appellant II that the second declaration of Mr Wedekind enclosed with a letter of 29 December 2004 should not be admitted into the proceedings before the Board of Appeal. This declaration was, however, submitted in response to issues raised by the Board in the annex to the summons to oral proceedings. In addition, it was filed within the period specified by the Board in the annex. This document is accordingly admitted into the proceedings.

3. *Sufficiency of disclosure (Article 83 EPC)*

Each of the independent claims of each of the requests of appellant II includes a passage corresponding to the passage in claim 1 as granted from column 19, line 37 to column 20, line 10, defining the shape of the belt strip. This definition corresponds to the shape of the belt strip as illustrated in Figure 9 of the patent in suit. This is an idealised shape which it is the object of the invention to obtain as accurately as possible (patent in suit, column 14, lines 53 to 58). It is clear to the skilled reader of the patent in suit that, after the step of cutting the belt material to form the belt strip, the strip has a form which deviates from the ideal form. Figure 10 of the patent in suit shows such deviations on an exaggerated scale.

Since the object of the invention forming the subject of the patent in suit is to reduce to a minimum the deviations from the ideal form, the skilled reader would not be led to expect that the belt strip would have the ideal form immediately after the cutting step. On the contrary, the definition of the shape of the belt strip is included in the independent claims in order to enable the definition of the claimed method or apparatus in terms of the belt strip which is to be fed to the building drum.

The disclosure of the patent in suit is thus sufficient to enable the person skilled in the art to carry out the invention.

4. *Alleged public prior use*

The Board is of the opinion that a public prior use of a belt strip feeding apparatus took place by virtue of the delivery of an automatic belt server referred to as a GS-2-300 in 1990 to Außenhandelsbetrieb der DDR, for installation at VEB Reifenwerke Riesa. Whilst it is alleged by appellant II that access to the Riesa Werke was restricted, this is not relevant to the question of public prior use which occurred as a result of the delivery of an automatic belt server to a third party.

This prior use was established in the opposition proceedings on the basis of the documents referred to as Anlagen 1 to 5, 13 to 16, 21 and 23 to 25, together with the testimony of the witness, Mr Wedekind. Drawings of the machine have been supplied as Anlagen 6 to 12, 17 to 20 and 22.

As set out under point 3 of the decision of the Opposition Division, the testimony of the witness, Mr Wedekind, was regarded by the Opposition Division as being credible. As discussed below in the following paragraph, the documents supplied are consistent with one another and with the statements of Mr Wedekind as recorded in the minutes of the hearing before the Opposition Division.

Appellant II is of the opinion that at least some of the documents relating to the prior use should be disregarded. It was pointed out that Anlage 5 bore a date which was earlier than that of Anlage 5.1, whereas the contrary would be expected. It was, however, explained that the dates are that of the printing of electronically stored documents. In the case of Anlage 24, it is not inexplicable that an AG should have existed in 1990. In the case of Anlage 25, the fact that the document was signed "i.V" is no reason to disregard the document. The mere fact that the description of the control system in Anlage 16, which is part of a parts list, is somewhat lengthy, is also insufficient reason to disregard this document. Accordingly, the Board does not see any inconsistencies which would warrant these documents being disregarded.

As regards the second declaration of Mr Wedekind enclosed with a letter of 29 December 2004, as set out below at point 7.3, it is not decisive in the present matter whether or not the sensors of the belt strip delivery apparatus were connected to analogue sample and hold devices. It is accordingly not necessary to

decide whether or not such devices were present in the apparatus for which delivery has been established.

5. *Main Request*

5.1 *Novelty of Claim 12*

As shown in Anlagen 6, 7, 8, and 12, the prior use apparatus comprises a supply reel for containing belt material, means for unwinding belt material from the supply reel, and conveying means for conveying the unwound belt material to a building drum having the features specified in claim 12. Adjusting means acting on the roller conveyor is shown in Anlage 7 (see Schnitt C-D). In addition, by virtue of the orientation of the cutting means, the belt strip has the form specified in the claim from column 21, line 52 to column 22, line 25. This was not contested by appellant II.

An arrangement for detecting the position of the edges of the belt strip is shown in Anlage 18, which is an enlargement of a portion of Anlage 17. As shown in the drawings constituting Anlagen 17 and 18, and discussed by the witness Mr Wedekind at page 3, lines 20 to 23 and page 4, lines 38 to 40 of the minutes of the hearing of the witness, the prior art apparatus comprises photo sensors for determining the position of the two side edges of the strip which produce analogue signals according to the degree to which the area on which the sensors are focussed are covered by the strip.

In addition, as discussed by the witness Mr Wedekind at page 3, lines 7 to 18 of the minutes of the hearing of the witness, the sensors are only activated at the moment they detect the presence of a belt strip. Thus, from the moment at which one of the sensors has detected a leading point of the strip until a portion of the strip is detected by the other sensor, that is, whilst the leading triangle passes the sensors, the signal from the first sensor is compared with a stored value ("Sollwert").

Since this stored value remains constant, it is equivalent to a signal representing a straight edge. Thus, at least during the time when the triangular leading and trailing ends are passing the sensors, the apparatus of the prior art is comparing the shape of the sections of one side of the belt strip with a shape of corresponding sections of a reference side. The apparatus accordingly comprises determining means for determining the shape of at least one side of the strip as required by claim 12.

It is argued on behalf of appellant II that this does not result in a determination of the *shape* of at least one side of the strip, since, at any one time, only one measurement can be made and used to control the transverse movement of the conveyor.

The prior art arrangement does not, however, differ from that claimed in the patent in suit in this respect, since it is only possible for the transverse movement of the conveyor to respond to the position of a side of the strip at a particular position at any one time and thereby adjust the shape of the strip. Thus,

the only reasonable construction which can be given the reference in claim 12 to the shape of the strip which is consistent with the preferred embodiment disclosed in the patent in suit includes the arrangement of the prior art within its scope.

The subject-matter of claim 12 is thus not novel in view of the public prior use of a belt strip feeding apparatus which took place by virtue of the delivery of an automatic belt server referred to as a GS-2-300 in 1990 to the Außenhandelsbetrieb der DDR.

6. *First Auxiliary Request*

6.1 *Allowability of amendments*

As compared with the claims as granted, each of the independent claims has in effect been divided in two, each of each pair of claims including a different limitation. This amendment is, however, seen by the Board as being occasioned by grounds for opposition specified in Article 100 EPC. In view of the fact that it has been held that claim 12 of the main request is not new, appellant II is justified in attempting to save as much of the subject-matter of the independent claims as possible, even if this involves an increase in the number of claims.

The Board is aware of the fact that, in decision T 937/00 the competent board remarked that there is no objection in principle to an increase in the number of independent claims (point 2.1 of the reasons), whilst in decision T 181/02 the competent board decided that the replacement of a single independent claim by two

independent claims was not allowable. It must, however, depend on the facts of the individual case whether or not such an amendment is reasonable and appropriate. In the present case, the amendment does not involve any undue complication or delay in the procedure and may be seen as balancing the interest of appellant II in attempting to obtain satisfactory protection of his invention with the interest of appellant I and the public in an efficient procedure.

The introduction of claims 20 to 35 thus complies with the requirement of Rule 57a EPC, so that the amendments involved in the first auxiliary request are formally allowable.

6.2 *Novelty of Claim 27*

Claim 27 of the first auxiliary request differs from claim 12 of the main request in that it is specified that the reference in the claim to "at least one side" refers to one of "the group consisting of the short side (36) of the leading end (33), the hypotenuse (35) of the leading end (33), the hypotenuse (39) of the trailing end (34) and the short side (40) of the trailing end (34)."

As discussed above in respect of the main request, the Board is of the opinion that the requirements specified in the claim with respect to "at least one side" are satisfied in the cases of the short side of the leading and trailing ends.

The subject-matter of claim 27 of the first auxiliary request is thus not novel for the reasons given above

in respect of claim 12 of the main request in view of the public prior use. The first auxiliary request therefore is not allowable.

7. *Second Auxiliary Request*

7.1 *Clarity*

7.1.1 The references in claim 1 to determining "the shape of at least one side" or "the shape of the sections of the at least one side" of the belt strip are understood as referring to determining successively the position of the at least one side. This is described in the patent in suit at column 15, lines 1 to 49 and illustrated in Figure 13. The stored measured values are considered to represent the shape.

7.1.2 It is objected by appellant I that the reference in claim 1 to "adjusting the shape of the sections of the at least one side of the belt strip (17) to the shape of the corresponding sections of the reference side" is not clear, since the shape of two sides cannot be adjusted simultaneously. Nevertheless, in the case of a single strip, it is the case that, for example, the short side of the leading and trailing ends and a long side of the central rectangular part are all adjusted. In such a case, three sides are adjusted simultaneously.

7.1.3 It is further objected by appellant I that the reference in claim 1 to "fixing the thus adjusted shape of the sections of the at least one side of the belt strip" is also not clear, since only the entire width of the strip can be fixed. This term is, however, understood as referring to the fact that, at any one

point along the length of the strip, an attempt may have been made to bring at least one side of the belt strip into a desired position, in which it is subsequently fixed.

7.1.4 Corresponding considerations apply to claim 12, which contains corresponding apparatus features.

7.1.5 Claims 1 and 12 are thus clear and comply with the requirements of Article 84 EPC.

7.2 In addition, the amendments comply with the requirements of Article 123(2) and (3) EPC. This was not disputed by appellant I.

7.3 *Novelty*

Claim 12 of the second auxiliary request differs from claim 12 of the main request in that it is specified that the comparison means comprises "a first memory for storing the shape as determined of the at least one side of the strip (17), a second memory for storing the shape of the at least one reference side concerned, calculating means for calculating the difference between the shape as determined of the at least one side and the shape of the reference side, and an electronic unit (24) for controlling the adjusting means, depending on the calculated difference."

As set out above in connection with the main request (see point 5.1), the apparatus of the public prior use is regarded as possessing a memory in the sense of the second memory specified in the claim, which stores the shape of a reference side. The apparatus does not,

however, possess a memory for storing the shape as determined of the at least one side of the strip. The sensors are analogue sensors which supply a continuous signal representing the shape of the side being detected.

As stated at the end of page 5 of the minutes of the hearing of the witness, Mr Wedekind stated that he could not say whether or not the signals from the sensors were stored.

Whilst, in the declaration of Mr Wedekind filed on 29 December 2004, it was stated that sample and hold devices connected to the sensors were included in the prior art apparatus, these are not considered to constitute a "first memory" in the sense of the claim, since when a continuous signal is received from an analogue device, no storage of a value occurs, as each measured value is constantly replaced by a subsequent value. The sample and hold devices only have a function when a side of the strip is no longer detected by a sensor, at which point the signal from the sensor is replaced by a signal from one of the sample and hold devices which is used as a stored value until the sensor once again detects the presence of a side.

The subject-matter of claim 12 is thus novel. Claim 1, directed to a method for feeding a belt strip to a rotating building drum, specifies the corresponding feature of "comparing the shape of the sections of the at least one side of the belt strip (17) stored in the first memory with a shape of corresponding sections of a reference side, which has been stored in a second

memory". The subject-matter of claim 1 is thus also novel for the same reasons as claim 12.

7.4 *Inventive step*

7.4.1 *Closest prior art*

The closest prior art is represented by the public prior use of a belt strip feeding apparatus which took place by virtue of the delivery of an automatic belt server referred to as a GS-2-300 in 1990 to the Außenhandelsbetrieb der DDR.

However, as discussed above in connection with the question of novelty (see point 7.3), the apparatus does not possess a memory for storing the shape as determined of the at least one side of the strip.

7.4.2 *Object of the invention*

The object of the invention can be regarded as being to provide a method and apparatus which enable a better positioning of the belt strip on the building drum.

7.4.3 *Solution*

According to claim 1 of the patent in suit, this problem is solved in the case of the method by storing the shape as determined of the at least one side of the strip in a first memory and comparing the shape of the sections of the at least one side of the belt strip stored in the first memory with a shape of corresponding sections of a reference side, which has been stored in a second memory.

According to claim 12 of the patent in suit, this problem is solved in the case of the apparatus by the provision of a first memory for storing the shape as determined of the at least one side of the strip, calculating means for calculating the difference between the shape as determined of the at least one side and the shape of the reference side stored in the second memory, and an electronic unit for controlling the adjusting means, depending on the calculated difference.

The presence of such a first memory enables, for example, a stored shape of a side of the leading end to be used in adjusting the shape of the trailing end and thereby enable a better positioning of the belt strip on the building drum.

The Board is not aware of any prior art which discloses a method or apparatus for feeding a belt strip to a rotating building drum incorporating such a memory. It is not accepted that there is an obvious need to store the measured values, since it is feasible, as was the case in the apparatus of the public prior use, to use measured values of the position of a side of the belt strip directly, that is, without storing those values, to adjust the shape of the strip. This also applies to the control device EKR 1 shown in annex 2 of the declaration by Mr Regterschot. The input to the device is an analogue signal which is compared with a stored value. The measured value is not stored.

The subject-matter of claims 1 and 12 thus involves an inventive step. Claims 2 to 11 and 13 to 19 are

directly or indirectly appendant to claims 1 and 12 and relate to preferred embodiments of the method of claim 1 and the apparatus of claim 12, respectively. The subject-matter of these claims thus similarly involves an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent on the basis of the following documents:

claims: claims 1 to 19 filed as second auxiliary request on 29 December 2004;

description: pages 2, 4, 7 to 10 and page 11, column 19, lines 1 to 9 as granted, and pages 3, 5 and 6 as submitted in the oral proceedings, and

drawings: Figures 1 to 15 as granted.

The Registrar:

The Chairman:

M. Dainese

W. Moser