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D E C I S I O N
of 5 July 2001

Case Number: T 0658/99 - 3.2.1
Application Number: 93830093.6
Publication Number: 0573397
IPC: B21D 7/024, B21D7/16

Language of the proceedings: EN

Title of invention:

A shaped groove countermatrix for rotary matrix pipe bending machines

Patentee:

C. M. L. Costruzioni Meccaniche Liri S.r.l

Opponent:

Ineco S.A.

Headword:

-

Relevant legal provisions:

EPC Art. 100(b), 123(2)
EPC R. 67, 68(2)

Keyword:

"Sufficiency of disclosure (yes)"
"Extension of subject-matter (no)"
"Remittal (yes)"
"Substantial procedural violation (yes)"
"Decision sufficiently reasoned (no)"

Decisions cited:

T 0676/90

Catchword:

-



Case Number: T 0658/99 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 5 July 2001

Appellant: Ineco S.A.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 10 May 1999
rejecting the opposition filed against European
patent No. 0 573 397 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: F. A. Gumbel
Members: J. Osborne
J. H. van Moer

Summary of Facts and Submissions

- I. The opponent's appeal is directed against the decision of the Opposition Division to reject the opposition against European patent No. 0 573 397.

- II. The opponent had requested revocation of the patent in its entirety on the grounds that the subject-matter of the claims lacked novelty and/or inventive step (Article 100(a) EPC), that the patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC) and that the subject-matter of the patent extended beyond the content of the application as originally filed (Article 100(c) EPC). In support of the argument of lack of novelty the opponent had offered an expert witness, Mr De Witt, to testify concerning the features of a counter-matrix which was the subject of an alleged prior use. The Opposition Division issued its written decision without hearing the witness.

- III. The decision of the Opposition Division was posted on 10 May 1999. Notice of appeal was received on 25 June 1999, the appeal fee was paid on 1 July 1999 and the reasons for appeal were received on 10 September 1999.

- IV. During oral proceedings held on 5 July 2001 the appellant requested that the decision under appeal be set aside and that the patent be revoked in its entirety on the grounds of Articles 100(b), (c) EPC. The appellant's auxiliary request was for remittal of the file to the first instance for further prosecution. The appellant also requested refund of the appeal fee.

The respondent (patent proprietor) requested that the appeal be dismissed. The appellant filed a declaration dated 26 June 2001 from Mr De Witt relating to identity between the allegedly prior used counter-matrix and the subject-matter of Claim 1 of the patent in suit.

- V. The patent as granted contains in addition to Claim 1 a single dependent claim defining a preferred embodiment of the subject-matter of Claim 1.

Claim 1 reads:

"A shaped groove countermatrix for rotary groove pulley matrix and countermatrix bending head for pipe bending machines, comprising a semicircular cross section tract and an end tract (2) in the sense of feed of the pipe during the bending operation, which end tract is tapered, both longitudinally and transversely relative to the semicircular cross section tract according to substantially elliptic profiles (20), the edge of the groove remaining at the same level, and having its cross section substantially determined by the arcs (4, 4') of two ellipses with their major axes parallel to and slightly offset with respect to the plane of longitudinal symmetry (8) of the groove, inferiorly radiused by an arc which is elliptic too (12), characterized in that the tapering of the end tract (2) starts from a substantially parabolic profile (14) having its axis on the plane of longitudinal symmetry (8) of the groove, its convexity (16) at a short distance from the exit section (18) of the groove, and lying on a plane perpendicular to the plane of longitudinal symmetry of the groove and intersecting the groove, said arcs (4, 4') of the ellipses which define said tapered end tract starting from said

parabolic profile (14)."

Claim 2 reads:

"A shaped groove countermatrix for rotary groove pulley matrix and countermatrix bending head for pipe bending machines according to Claim 1, characterized in that it comprises means (22, 22') for feeding a lubricating fluid veil on the groove, in fluid communication with the surface of the groove through a hole (24) by means of wick means (24'), and endowed with recharging means (26)."

VI. The appellant's arguments can be summarised as follows:

The content of the application was amended during examination proceedings in three ways, each of which constitutes a violation of the provisions of Article 123(2) EPC. The application as originally filed contained two separate inventions, defined in two independent claims. The amendment of Claim 2 to be formulated as a claim dependent on Claim 1 introduced a combination of features which was not originally disclosed. As set out in T 0676/90, the disclosure of the drawings cannot be considered in isolation from the description and in the present case this did not disclose originally that the now claimed combination of features was advantageous. Moreover, the application as originally filed contained no disclosure of the features in granted Claim 1 that the plane on which the parabolic profile lies is "perpendicular" to the plane of longitudinal symmetry of the groove and that the arcs of the ellipses which define the tapered end tract "start from the parabolic profile".

The patent specification does not disclose the invention sufficiently for it to be carried out by a skilled person because, whereas according to Claim 1 the cross-section of the groove is determined by the arcs of two ellipses inferiorly radiused by a third elliptical arc, the arcs of the ellipses starting from the parabola, as seen in Figure 2, the description indicates that within the boundary of the parabola the groove cross-section is circular. Furthermore, the feature in Claim 1 that the groove tapers "both longitudinally and transversely" is unclear in itself and the description contains no indication of how this feature is to be achieved. There is no indication in the specification which feature is defined by the term "upper edge" in Claim 1.

The Opposition Division committed a substantial procedural error in neither hearing the witness nor indicating in the decision under appeal why this was not done.

VII. The respondent essentially argued that:

The combination of the features of Claims 1 and 2 is clearly disclosed in the drawings, in particular Figures 1, 6 and 7, and the respective passages in the description.

The perpendicularity of the parabolic profile to the plane of longitudinal symmetry is derivable from Figure 1 in that the parabola is seen to be symmetrical. Moreover, a perpendicular arrangement would be the normal choice of the skilled person. The feature in granted Claim 1 that the ellipses which define the tapered end tract start from the parabolic

profile is disclosed in original Claim 1 in the combination of the wording "tapered ... according to substantially elliptic profiles" and "the tapering of the end tract starting from a substantially parabolic profile".

The groove cross-section formed entirely from ellipses, as shown in Figure 2, relates only to the portion of the end tract between the vertex of the parabola and the end of the groove. Within the extent of the parabola the groove is formed by an arc of a circle.

Reasons for the Decision

1. The appeal is admissible.
2. *Extension of subject-matter*
 - 2.1 In the original application Claim 1 related to the cross-section of the groove of the counter-matrix, the form of which solved the problem that a visible change in the cross-section of the pipe could be seen after bending using a prior art counter-matrix (column 1, lines 45 to 48; column 2, lines 21 to 26). Claim 2, on the other hand, related to the provision of lubricating means in the counter-matrix, solving the problem of the need to provide lubrication during the bending operation (column 1, lines 49 to 52; column 2, lines 27 to 29). However, Figure 1 clearly shows the subject-matter of both Claims 1 and 2 in a single die. Moreover, the disclosure was of a single embodiment (column 2, lines 31, 32; column 3, line 26) and of a single invention (column 1, Lines 1, 45, 49, 53; column 2, lines 14, 21, 30; column 3, lines 18, 25).

The Board therefore considers that the amended dependency of the claims does not extend the subject-matter beyond that of the application as originally filed.

2.2 T 0676/90 concerned the deletion of a feature from a claim and the matter at issue was whether a Figure which showed some features in the absence of the deleted feature was a disclosure of the broadened subject-matter. The Board considered that the content of an application was determined neither by the disclosed features alone nor by the content of a single sentence or Figure but by the relationship of the features to each other (Reasons 2.4, 1st paragraph). In the present case there is no deletion of a feature and no functional relationship between the features of Claims 1, 2 is derivable either from the original application or from the patent specification, the features originally having been disclosed and now being claimed in juxtaposition. The above finding of the Board in this case therefore is consistent with T 0676/90.

2.3 The original application contained no explicit disclosure relating to the orientation of the parabolic profile. The disclosure therefore is limited to that which the skilled person would derive from the application in the light of his understanding of the function of the counter-matrix and in the knowledge that the groove itself is symmetrical (see original Claim 1 "plane of longitudinal symmetry of the groove"). The Board considers that, in the absence of any indication in the application that a non-symmetrical orientation of the parabolic profile would bring an advantage, the skilled person would inevitably

arrive at the conclusion that it would be perpendicular to the longitudinal axis. This feature therefore does not extend beyond the content of the application as originally filed.

2.4 According to original Claim 1 the tapering of the end tract not only was "according to substantially elliptic profiles" but also started from a "substantially parabolic profile". Since ellipses are composed of arcs, it appears to the Board that a combination of the two said features automatically results in the feature that the arcs of the ellipses which define the tapered end tract start from the parabolic profile. Also in this respect the Board therefore finds no contravention of the provisions of Article 123(2) EPC.

3. *Sufficiency of disclosure*

3.1 In order to come to a conclusion regarding the objection of the appellant concerning the cross-section of the grooves the Board considers it to be useful firstly to summarise the content of the patent specification in this respect. Figure 1 is a plan view of the counter-matrix of the invention showing the floor of the groove and wherein the white area is of a cross section formed by an arc of a circle whilst the area having a network of lines is that in which the elliptical tapering is present (column 2, lines 33 to 39). The white area is partly delimited by a parabolic profile 14 having its vertex a short distance from the end of the groove. Beyond the vertex of the parabola the network of lines extends across the full width of the groove. Figure 2 is a cross-section through the counter-matrix at an undefined position, showing the elliptical form of the arcs which define the groove

(column 2, lines 39, 40). However, since the cross-section of Figure 2 is constituted by elliptical arcs it is clear that it represents only the area at the end of the groove, beyond the vertex of the parabola. A horizontal dashed line present in Figure 1 would create no confusion in this respect for the skilled person since it represents the hidden detail of a step in the base of the counter-matrix visible in Figures 4, 5, 6. The skilled person therefore is presented with sufficient information to create a counter-matrix in which the groove tapers towards one end according to elliptical profiles, whereby within the longitudinal extent of the parabolic profile the cross-section includes at its bottom an arc of a circle and only the extreme end portion of this part of the groove is constituted by elliptical arcs.

3.2 However, Claim 1 specifies that the end tract has its cross-section "determined by the arcs of two ellipses ... inferiorly radiused by an [elliptical] arc ... said arcs of the ellipses which define said tapering end tract starting from said parabolic profile". This wording of Claim 1 is inconsistent with the disclosure of the description in as far as it appears from the claim that the ellipses starting from the parabolic profile are also those which are inferiorly radiused by an elliptical arc. In the opinion of the Board, however, the skilled person armed with the teaching of the description would understand that the claim is merely unclear in that it does not distinguish between the two sections of the end tract, on the one hand that in which the ellipses start from the parabolic profile and are inferiorly radiused by a circular arc, and on the other hand that in which they are beyond the vertex of the parabolic profile and are inferiorly radiused by an elliptical arc. The Board therefore does not consider that this inconsistency would prevent the skilled person from putting the invention into practice.

3.3 Claim 1 specifies that the end tract tapers "both longitudinally and transversely" and the description contains the corresponding wording "tapered both in the transversal and in the longitudinal sense" (column 2, lines 36 to 39). Since the tapering of a body of revolution conventionally is defined in the longitudinal direction, the specification that there is longitudinal tapering in addition to transverse tapering does not have a clear meaning. However, the claim additionally specifies that "the edge of the groove remains at the same level". In the opinion of the Board it is clear that this is the upper edge of

the counter-matrix as seen in Figure 5 since the only other edge of the groove in the area of the tapering end tract is the exit edge 18 which explicitly is disclosed as being raised above the level of the groove floor (column 2, lines 55 to 58). The Board considers that the skilled person wishing to make technical sense of the specification therefore would understand the term "longitudinally", when seen in the light of the edge of the groove remaining at the same level, as defining that the groove tapers also in height. That the disclosure of the specification is sufficient to allow a skilled person to put into practice a counter-matrix having a groove tapering in both height and width has not been put into question by the appellant and the Board is of the opinion that no obstacle within the meaning of Article 100(b) EPC exists.

3.4 Other objections made by the appellant relate only to clarity of the wording of Claim 1. In the case of a claim which has not been amended since grant clarity does not form the subject of objection during opposition procedure and so these objections need not be treated in this case. Indeed, the appellant did not rely on these other objections during the oral proceedings.

4. *Procedural aspects*

4.1 In the notice of opposition under the heading of "novelty" the opponent presented arguments and evidence in respect of an alleged prior use of a counter-matrix identified as "Exhibit 26". Beginning in the final paragraph of page 7 the opponent referred to Claim 1 of the opposed patent. In the third paragraph of page 8 the opponent stated that Exhibit 26 comprised *inter*

alia a parabolic profile from which elliptical tapering of the end tract begins. In the fourth paragraph of page 8 the opponent offered a witness Mr De Witt as an expert to "confirm that the prior art counterbending die as sold ... shows all the features of Claim 1".

4.2 In the decision under appeal the Opposition Division states that "none of the documents mentioned in the course of the proceedings" discloses all features of the claim (point 12). In respect of the alleged prior use the Opposition Division states that the assertion is based on two documents D9, D10 (Point 12.1). Also in the facts and submissions the Opposition Division refers to the opponent's allegation of lack of novelty over a prior use "proved by documents D9 and D10". Under point 12.2 the Opposition Division then states its opinion that "the evidence submitted by the opponent cannot prove, without doubt, that the object of the claimed prior use corresponds to ... Claim 1" and the subsequent reasons in support of this opinion make no reference to the offer of a witness. In particular, in the final paragraph of point 12.2 the Opposition Division states that "there is no explicit mention in [D10] of a parabolic profile".

4.3 The "evidence submitted by the opponent" in respect of the alleged prior use includes the testimony of Mr De Witt who was offered as a witness to confirm that Exhibit 26 comprised all of the features of Claim 1 and the notice of opposition explicitly refers in this respect to a parabolic profile. In the light of this evidence it was necessary for the Opposition Division either to hear the witness's testimony or to explain in its decision why such a testimony was considered not to be necessary in arriving at a conclusion in the case.

As a result of the Opposition Division's failure to take this evidence into account, neither the appellant nor the Board is able to consider why the Opposition Division came to the conclusion that it did. The Board considers that this omission from the Opposition Division's written decision contravenes the requirement of Rule 68(2) EPC that decisions subject to appeal must be reasoned. This amounts to a substantial procedural error in the light of which refund of the appeal fee is considered equitable.

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 for further prosecution.
3. The appeal fee is refunded.

The Registrar:

The Chairman:

S. Fabiani

F. Gumbel