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Datasheet for the decision of 2 February 2007

Case Number: T 0026/05 - 3.2.01

Application Number: 97200573.0

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IPC: F16L 21/08

Language of the proceedings: EN

Title of invention:
A coupling device

Patentee:
Georg Fischer WAGA N.V.

Opponent:
Glynwed Pipe Systems Ltd

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0026/05 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 2 February 2007

Appellant: (Patent Proprietor)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 6 December 2004 revoking European patent No. 0794378 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: S. Crane
Members: C. Narcisi
G. Weiss

Summary of Facts and Submissions

I. The European patent No. 794 378 was revoked by the decision of the opposition division posted on 6 December 2004. An appeal was lodged by the patentee against this decision on 30 December 2004 and the appeal fee was paid at the same time. The statement of grounds of appeal was filed on 23 February 2005.

II. The appellant (patentee) requested that the decision be set aside and that the patent be maintained as granted.

Granted claim 1 reads as follows:

"A coupling device for a tube (10) comprising a sleeve part (1) having at least one insert end (2) for the tube (10) and a sealing organ (3) which is suitable to provide a seal around the tube (10) inserted into the sleeve part (1), which sealing organ (3) comprises a plurality of essentially wedge-shaped elements (4) forming a ring around the tube (10), and which organ is further provided with pressure means (5,6,7,8,9,11) for pressing the elements (4) against the tube (10), whereby the elements (4) along the outer circumference of said ring have a higher thickness than along the said ring's inner circumference, characterized in that the elements (4) slidably abut to each other so as to form a substantially closed ring, and have a length which is larger than said thickness along the ring's outer and the inner circumference so as to cause that the elements (4) rotate and maintain their slidably abutting interrelation when the pressure means (5,6,7,8,9,11) operate for adjusting the ring's diameter to the tube (10)."

With letter dated 6 July 2006, the respondent (opponent) requested that the appeal be dismissed.

III. The arguments presented by the appellant in the grounds of appeal may be summarized as follows:

The opposition division has violated established case law of the boards of appeal laying down that the interpretation of a claim should be technically sensible and should take into account the whole disclosure of the patent (T 190/99). Moreover, the description and the drawings should be used to make an objective assessment of the subject-matter of a claim to judge whether its subject matter is novel and inventive (T 23/86, T 16/87). In its assessment whether document D3 (EP-B-0 690 256) discloses the features of claim 1 the opposition division has violated this case law in that it has considered said features in isolation from the description and the drawings and disregarding their function. In particular, the contested decision erroneously states that D3 discloses a sealing organ comprising a plurality of essentially wedge-shaped elements 36,37 (D3, fig. 8,9). In fact the overall form of the main body of said elements is not wedge-shaped. Also, contrary to the statement in the contested decision, said elements 36,37 do not have, along the outer circumference of the ring formed by these elements, a higher thickness than along said ring's inner circumference. Here again, exclusively the thickness of the main body of element 36,37 has to be considered, thus disregarding the projection carrying the lug 39. In this case, the thicknesses of said elements respectively along the inner and along the

outer circumference of the ring are seen to be substantially equal. The elements 36,37 were likewise held by the opposition division to slidably abut each other. This is erroneous, since the claim implies that the elements have abutting surfaces which are in sliding contact along their length, whereas this is impossible for the elements 36,37 disclosed in D3 which have a lug 39 inserted in a pocket 40 of the neighbouring element. In the same way, the elements 36,37 do not have a length that is larger than said thickness along the ring's outer and inner circumference. In the light of the description of the patent it is clear that the length must be understood in the radial direction and in this case the above property is evidently not fulfilled by said elements 36,37 in D3. Finally, even the statement in the contested decision implying that said elements 36,37 rotate for adjusting the ring's diameter to the tube is not correct. In fact, this is neither taught nor possible with the ring consisting of elements 36,37 disclosed in D3, since by virtue of the lug 39 rotatively connecting two neighbouring elements no rotation of said elements for adjusting the ring's diameter to the tube is possible according to D3.

The opposition division further sets out in the contested decision that even interpreting said length in granted claim 1 as being in the radial direction would not lead to a subject-matter which involves an inventive step over the disclosure of D3. The appellant disagrees with the view taken by the opposition division since again the mentioned feature has clearly been considered in isolation. While it is generally true that choosing the appropriate length of any

constructive element lies within the capability of the skilled person, no suggestion can be found in D3 to select said element with a length having the above specific feature which permits the automatic adjustment of the ring consisting of said elements to the outer diameter of the tube.

IV. The arguments presented by the respondent may be summarized as follows:

The features comprised in granted claim 1, such as (i) "..the elements (4).. have a length which is larger than said thickness along the ring's outer and inner circumference.." and (ii) "..so as to cause that the elements rotate and maintain their slidably abutting interrelation when the pressure means operate for adjusting the ring's diameter to the tube", are not disclosed, in particular not in combination, in the original patent application, thus contravening Article 123(2) EPC. Further, also the specific term "length" does not appear in the original application, nor does the feature that (iii) "..the elements along the outer circumference of said ring have a higher thickness than along the said ring's inner circumference". Specifically, the application as filed makes no disclosure as to a relationship between a length and a circumferential thickness of the elements (4), and certainly no disclosure that this relationship is "so as to cause" the rotation of the elements (4) and maintenance of the slidably abutting interrelation. Finally, the feature "essentially wedge-shaped elements (4)" in granted claim 1 was likewise not originally disclosed, since this feature was introduced by way of an amendment based on originally filed dependent

claim 2, which however merely stated that "the elements (4) are substantially wedge-shaped". The meaning of the term "essentially" is of being vitally important, absolutely necessary, fundamental or indispensable and only if its use is intended to confirm this fact the meaning of "essentially" can be understood. If, however, any other meaning is intended, then this definition contravenes the requirements of Article 123(2) EPC.

As to the question of novelty of the subject-matter of granted claim 1 with respect to D3, reliance cannot be made on features which have been introduced into the application in prosecution and which are not supported by the application as originally filed. In particular, the interpretation of the term "length" as being for example necessarily in one of a radial or axial direction is unsupported and entirely arbitrary, since these directions represent only two of a number of possible directions and the specification as originally filed makes no mention of any length. Even the combination of above mentioned features (i) and (ii) cannot confer novelty to the claimed subject-matter, since this is already disclosed in prior art D3. In fact, it is immaterial how small the relative rotation between two contiguous elements might be according to the disclosure of D3, since any amount of rotation would satisfy the requirement implied by said features (i) and (ii). This notwithstanding, when compressing the gripping device (36) of document D3 in order to accommodate pipes of different diameter and achieve a fluid-tight seal, there is necessarily significant rotation of the segments or elements (37) since compression of a segmented annulus of the kind of document D3 is not possible without rotation of the

linking elements (37). Thus, the claimed subject-matter lacks novelty over D3.

Even if the subject-matter of granted claim 1 were considered to be new, on the assumption that D3 does not disclose an element having a radial length greater than the thickness at the inner or outer circumference of said ring formed by said elements, nevertheless such a feature could not possibly have any inventive merit. In fact, this feature merely represents a design feature which has no relevance to the objective technical problem, that is, the provision of a pipe coupling which readily adapts to pipes of different diameter and accommodates irregularities in the surface of the pipe. Specifically, for a sufficiently large number of said elements, while keeping the tube's diameter constant, the length of said elements will necessarily be greater than their thickness. Finally, documents D2 (WO-A-90/07671) and D4 (US-A-4 886 304) already disclose elements having a length in axial direction larger than their thickness in circumferential direction, thus indicating that the mentioned feature lies within the skilled person's capability.

V. With letter dated 30 November 2006 the respondent informed the Board that it was withdrawing from the appeal procedure.

Reasons for the Decision

1. The appeal is admissible since it meets the requirements of Articles 106 to 108 EPC in conjunction with Rule 1(1) and 64 EPC.

2. The subject-matter of claim 1 does not contravene the requirements of Article 123(2) EPC. In fact, the above mentioned features (i) and (ii) considered in combination are supported by the originally filed patent application, particularly in column 2, lines 9-17 and in column 3, lines 50-54 in conjunction with figures 3A and 3B of the published patent application. The cited passages in the originally filed application state that a "diameter adjustment" can be performed "which decreases the ring diameter" "by shifting the abutting elements" and by "interrotation" of the elements 4". This adjustment is illustrated in figures 3A and 3B, representing a radial cross section of the tube and of the ring formed by the elements 4, which both clearly show that the "slidably abutting interrelation" with their "interrotation" is made possible by the choice of the radial length of said elements 4, which is considerably larger than the circumferential thickness of said elements, both along the inner and outer circumference of the ring, thereby implying that a large a number of elements can be used. By this configuration "a limited open space between the different elements 4 and the surface of the tube 10 against which they abut" (published application, column 4, lines 45-47) is obtained and indeed a "diameter adjustment" can be achieved by proper "interrotation" of the elements 4.

The respondent's contention with respect to feature (iii) appears to be equally unfounded. Indeed, said feature (iii) in conjunction with the further claimed feature stating that said elements are "essentially wedge-shaped" appears to obviously imply that said "elements radially increase in thickness", as indicated in original claim 1. Finally, the term "essentially" in the context of claim 1 and in conjunction with the patent specification does not apparently have a different meaning from that implied by the term "substantially". In both cases it is merely meant to indicate that the wedge-like shape is a vital and fundamental feature of said elements.

3. It follows clearly from the above discussion that, contrary to the respondent's allegations, the term "length", as supported by the originally filed application, is obviously to be understood as the length of the elements 4 considered in the radial direction of the tube, i.e. measured from the radially inner end of an element to its radially outer end. This already by itself implies that the subject-matter of claim 1 is novel over the cited prior art and in particular over D3, since neither D3 nor any of the cited documents discloses elements forming a ring around the tube and having a radial length greater than their circumferential thickness, i.e. measured transversely to said length measurement, along both the inner and outer circumference of the ring. Moreover, the further mentioned feature (ii) likewise cannot be regarded as known from D3. In fact, since the elements in D3 have a circumferential thickness considerably larger than their radial length and since they are disposed with their thickness essentially symmetrical

and perpendicular to the radial direction of the tube, a uniform compression of said elements 36,37 (fig. 8,9) by the annular collars 32 to adapt to different diameters of the tube would merely lead to uniform compression of said elements in all directions, thus essentially preserving the relative angles between the elements and implying an essentially stable configuration with respect to the elements, such that neither an "interrotation" nor a relative sliding abutment between said elements would occur. It is noted here that the tube is evidently assumed to be substantially cylindrical in claim 1 as well as in the overall application, as it results clearly for instance from the wording "for adjusting the ring's diameter to the tube", and that any other configuration is not encompassed by the scope of the claim. In view of this the novelty of the claimed subject-matter over D3 is clearly given.

4. For the appreciation of inventive step it has in the first place to be stressed that, in contrast with the respondent's assertions, neither D2 nor D4 disclose elements forming a ring around the tube and having a radial length which is larger than their thickness along the ring's outer and inner circumference. Consequently, as already seen above, the mechanism of "diameter adjustment" as implied by feature (ii) likewise cannot be present in D2 or D4. In addition, said features (i) and (ii) do not merely result from any arbitrary different selection of said radial length, which could usually be performed by a skilled person in case of necessity according to the respondent's argumentation. Indeed, in order to obtain the mentioned effect of "diameter adjustment" implied by claim 1 and

in order to obtain only "a limited open space between the elements 4" (see point 3) not any length will do but a length considerably larger than said thickness would have to be selected. Further, even this would not suffice to achieve the mentioned effect, since this effect is also due to the further claimed functional feature specifying that said elements "slidably abut" and are maintained in a "slidably abutting interrelation", which is accomplished by arranging said elements in an inclined position with respect to the radial direction of the tube, as is apparent from figures 3A and 3B and as follows from the discussion under point 4. In this respect it is noted that none of the cited documents suggests to arrange said elements in an inclined manner with respect to said radial direction, let alone to arrange said elements to "slidably abut" and to maintain them in a "slidably abutting interrelation".

In view of the above it is concluded that the subject matter of granted claim 1 fulfils the requirement of inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

1. The appealed decision is set aside.

2. The patent is maintained as granted.

The Registrar: The Chairman:

A. Vottner S. Crane