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DECISION
of 9 October 2003

Case Number: T 0550/01 - 3.5.2

Application Number: 92830133.2

Publication Number: 0505335

IPC: H01R 13/52

Language of the proceedings: EN

Title of invention:

Continuous protective sheath for electrical cables

Patentee:

Sylea Italia S.r.l.

Opponent:

Leonische Drahtwerke AG

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 83, 84, 123(3)

Keyword:

"Clarity - (yes, on amendment)"
"Novelty - (yes, on amendment)"
"Inventive step - (yes, on amendment)"

Decisions cited:

-

Catchword:

-



Case Number: T 0550/01 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 9 October 2003

Appellant: Sylea Italia S.r.l.
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Representative: Lorenz, Werner, Dr.-Ing.
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Respondent: Leonische Drahtwerke AG
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 2 March 2001
revoking European patent No. 0505335 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: R. G. O'Connell
J. H. P. Willems

Summary of Facts and Submissions

I. This is an appeal against the revocation of European patent 505 335 for insufficiency of disclosure (Article 83 EPC and Article 100(b) EPC). The latter was introduced as a fresh ground for opposition by the opposition division in oral proceedings, the patent having been originally opposed on grounds of added subject matter (Article 123(2) EPC and Article 100(c) EPC), lack of novelty and lack of inventive step (Articles 54, 56 and 100(a) EPC).

II. The following prior art documents were cited in the notice of opposition:

D1: DE-U-7 617 838

D2: DD-C-148 547

D3: DE-A-3 048 008.

III. With a letter dated 26 September 2003 the appellant proprietor filed further amended claims in advance of oral proceedings which took place on 9 October 2003. Claim 1 of the main request is now worded as follows:

"A wiring assembly protected against penetration of moisture comprising:

- 1.1 an elongated handle element (2) having an electric contact bearing block (6) provided for connection to mating electric contacts of a motor vehicle electric system,
- 1.2 said elongated handle element (2) having a substantially parallelepipedal configuration,

- 1.3 on a minor face of said elongated handle element (2) is defined an inlet to be protected against penetration of moisture,
- 1.4 in said inlet on said minor face of said elongated handle element (2) is engaged one end portion of an electric cable (5) having an outer sheath (4) and a plurality of electric inner conductor wires, characterised in that
- 1.5 said wiring assembly (1) further comprises, near said inlet of said handle element (2), a foamed plastic sealing structural element (3) for protecting said inlet against penetration of moisture,
- 1.6 said sealing structural element (3) including a substantially parallelepipedal body,
- 1.7 said end portion of said outer sheath (4) being embedded, together with a corresponding portion of said handle element (2), in said sealing structural element (3),
- 1.8 said substantially parallelepipedal body of said sealing structural element (3) is perfectly bound both to said outer sheath (4) of said electric cable (5) and to a corresponding portion of said handle element (2),
- 1.9 said handle element (2) is housing, in a perfectly sealed manner, said contact bearing body (6)."

Claims 2 to 4 are dependent on claim 1.

IV. The appellant proprietor argued essentially as follows:

The previous interpretation of the original disclosure, in particular the figure, as showing the assembly in a stage prior to its final assembled state with the

sheath 4 protruding on the left of element 3 as the unreferenced portion, was now recognised as being misconceived and was no longer maintained. It was now accepted and argued that the said unreferenced portion in the figure was indeed an integral cable inlet portion of the handle element 2 embedded in the sealing structural element 3. It was submitted that this revised interpretation was in accord with the figure, the language of the original disclosure and claims and the present set of claims. The latter represented a return to the "embedding" terminology of claim 1 as originally filed and was a permissible restriction of the protection as far as Article 123(3) EPC was concerned. Furthermore this revised interpretation made it clear what the invention was and how it was to be performed thus meeting the requirements of Article 83 EPC and Article 84 EPC.

No credible argument could be advanced as to lack of inventive step since the only prior art document (D2) which disclosed the use of foamed plastic in a wiring assembly did so for the entirely different purpose of strain relief of the cable termination. There was no suggestion in D2 or anywhere else in the prior art that foamed plastic should be used as claimed in the amended patent for preventing penetration of moisture.

V. The respondent opponent argued essentially as follows:

Sufficiency, clarity (Articles 83, 84 EPC)

The interpretation of the claims now adopted by the appellant proprietor in the oral proceedings had not featured in either the examination or opposition

procedure or in the written appeal procedure. The appellant proprietor was now resiling from an interpretation of the figure as showing the wiring assembly in a state prior to final assembly in which a portion of the sheath 4 was visible between the handle 2 and the foamed structure 3 despite the fact that he had contended in the statement of grounds of appeal that this latter interpretation was self-evident for the person skilled in the art and left no room for any other interpretation. At the very least this contradiction showed that it was not possible to come to an unambiguous conclusion as to what was actually taught or claimed by the patent either as granted or as now amended. Hence neither the requirements of Article 84 EPC nor of Article 83 EPC were met.

Extension of protection (Article 123(3) EPC)

Claim 1 of the patent as granted did not use the term "embedding"; the phrase "including a substantially parallelepipedal body which is perfectly bound both to said outer sheath (4) of said electric cable (5) and to a corresponding portion of said handle element" used in that claim was directed to an arrangement of the kind now resiled from - the figure showing the assembly prior to its final state - and was not apt to specify an arrangement in which the unreferenced portion intermediate items 2 and 3 represented a projecting cable entry duct integral with the handle element 2 which projection was embedded in the structural element 3 - the figure showing the finished assembly. In the description both of the patent and the application as originally filed Figure 1 is described as showing "a sealing structural element applied **to an end portion of**

the sheat (sic) according to the invention." This was consistent with the previous interpretation (now resiled from) that the figure shows the state prior to final assembly state with the element 3 still to be pushed over the corresponding portion of the handle element 2. Given that the earlier claim, on the appellant proprietor's own admission, had this interpretation, the claim as now amended would extend the protection conferred by encompassing a variant whereby a projecting integral inlet duct portion of the handle element 6 is embedded in the structural element 3. Such an amendment was forbidden by Article 123(3) EPC.

Inventive step

D3 disclosed a cable harness suitable *inter alia* for motor vehicles. The problem solved by this prior art cable harness was to provide a simply constructed cable harness which was in its entirety, but especially at the conductor ends, resistant to damp (D3, page 4, lines 20 to 22). In the embodiment illustrated in Figure 3 of D3 this problem was solved by forming a (perfectly bound) sealing body 8 at the cable-side end face of a housing, which housing enclosed in a sealed manner a contact block 3; thereafter the cable sheathing was injection moulded over the sealing body 8 (D3, page 6, line 25 to page 7, line 9). Hence the only feature of the wiring assembly claimed in the opposed patent which was not disclosed in this embodiment of D3 was the use of foamed plastic as a material for the final moulding step. This material was however known to the skilled person as suitable for use in securing cable terminations as evidenced by D2. It should also

be noted that the problem of preventing the ingress of moisture is also mentioned specifically in the latter document at page 2, penultimate paragraph. No inventive step was involved in using the foam material taught by D2 in the final moulding step of D3 thus arriving at the subject-matter of claim 1 of the opposed patent.

VI. The appellant proprietor requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or alternatively the auxiliary request, both filed with the letter of 26 September 2003.

VII. The respondent opponent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. *Sufficiency, clarity (Articles 83, 84 EPC)*

2.1 In the decision under appeal the opposition division found that "undue doubt subsisted in respect of what subject-matter was really defined by the current terms of amended claim 1, particularly with reference to the amended features." Despite this finding the opposition division did not address the question of whether amended claim 1 met the requirements of the EPC in respect of clarity, ie Article 84 EPC, but thought it appropriate instead to introduce of its own motion a new ground for opposition, viz insufficiency (Article 83 EPC and Article 100(b) EPC). Nonetheless

the ensuing detailed reasoning in the decision under appeal has almost exclusively Article 84 EPC character, ie it deals with the difficulty of determining what the invention is, not how it is to be performed. The same is true of the respondent opponent's submissions in the appeal proceedings. The opposition division was, of course, correct in its observation that examination in respect of Article 83 EPC starts with attempting to identify the invention as claimed. If, however, this attempt is found not to succeed, then, in the view of the board, the real issue is lack of clarity. The board has accordingly examined the appeal from this point of view.

- 2.2 A key finding in the decision under appeal (point 3.3) which is still relevant for the current claim 1 was that there did not appear to be any feasible manner of interpreting the terms of claim 1 so that "a corresponding portion of said handle element (can in practice) be **embedded in** (ie enclosed completely in) said sealing structural element". In the judgement of the board, this interpretative impasse is resolvable by reference to the single figure of the patent which shows an unreferenced portion intermediate the handle element 2 and the sealing structural element 3. One way of interpreting the claim to make linguistic and technical sense is to view this unreferenced portion as being a cable inlet stub which forms the "corresponding portion of the handle element". The appellant proprietor has previously contended that this unreferenced portion was a portion of the outer sheath 4 emerging from the sealing structural element 3, but now resiles from this view acknowledging that such an interpretation would mean that the problem addressed

by the invention, ie perfectly sealing the cable sheath entry to the handle element 2 against ingress of moisture, would not be solved.

- 2.3 The respondent opponent contends that the later-advanced interpretation of the figure is flawed by the fact that the figure appears to show the sealing structural element 3 as straddling the unreferenced intermediate portion rather than enclosing it completely at the bottom. While acknowledging that the drawing does lend itself to this interpretation, the board considers that this imperfection is not so grave as to force a construction of the claim and the figure which, taken as a whole, would make no technical sense. It is a well established canon of claim construction that an interpretation which leads to an absurd result is to be rejected when a reasonable alternative interpretation is possible.

3. *Extension of protection (Article 123(3) EPC)*

The board is not persuaded by the respondent opponent's argument that the claim as granted did not confer protection on an embodiment in which a corresponding portion of the handle element is embedded in the sealing structural element. The terms of claim 1 as granted - "a foamed plastic sealing structural element (3) for protecting said inlet against penetration of moisture, including a substantially parallelepipedal body which is perfectly bound...to a corresponding portion of said handle element", do not, on the board's interpretation of those words, exclude the corresponding portion being embedded in the sealing structural element. The fact that dependent claim 2 of

the granted patent is apparently directed to a non-embedded variant supports the board's view that claim 1 as granted encompassed both embedded and non-embedded variants. Accordingly the current claim 1 is a restriction of the protection conferred, which is a permissible amendment under Article 123(3) EPC.

4. *Novelty*

Lack of novelty was alleged in the notice of opposition but has not been substantiated. The respondent opponent conceded in the oral proceedings before the board that the only cited prior art document disclosing a foamed plastic structural element, D2, discloses that as a cable cushioning (Zugentlastung) means in a moulded plug, not as a sealing structural element to protect a wiring assembly against penetration of moisture. The subject-matter of claim 1 is accordingly new.

5. *Inventive step*

The issue of inventive step reduces to the straightforward question of whether it would be obvious for the person skilled in the art starting from the wiring assembly illustrated in D3, Figure 3, to surround or embed the element 8 in a plastic foam, such as the polyurethane foam mentioned in D2, instead of a more conventional plastic cable sheathing material in order to enhance its resistance to ingress of moisture. The respondent opponent has not put forward any persuasive argument why the skilled person would do this. Although the moisture problem is mentioned in D2, it is in a passage referring to a prior art construction in which an adhesive sealant ("klebefähige

Dichtungsmasse") is used for this purpose. The problem solved by the plastic foam in D2 is a different one, viz cushioning a cable entry so as preventing the transmission of potentially damaging tension to the conductors. Absent any disclosure or suggestion in the prior art of the use of foamed plastic for preventing the ingress of moisture in a wiring assembly of the kind specified in claim 1, it cannot plausibly be said to be obvious for the skilled person to adopt this material for this purpose in this context.

6. The board concludes that the patent as now amended and the invention to which it relates meet the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent in amended form on the basis of claims 1 to 4 of the main request filed with the letter of 26 September 2003, the description and the figure as granted.

The Registrar:

The Chairman:

D. Sauter

W. J. L. Wheeler