

Decision of Technical Board of Appeal 3.3.1 dated

21 September 1995

T 422/93 - 3.3.1*

(Translation)

Composition of the board :

Chairman : A. J. Nuss

Members : P. P. Bracke

W. Moser

Patent proprietor/Appellant : Jalon, Michel

Opponent/Respondent: GAO Gesellschaft für Automation und Organisation mbH

Headword: Luminescent security fibres/JALON

Article: 52(1), 54, 56 EPC

Keyword: "Novelty (yes)"- "Inventive step (yes) - non-obvious alternative" -

"Definition of the skilled person"

Headnote

1. When examining for inventive step using the "problem and solution" approach, the starting point for defining the appropriate skilled person is the technical problem to be solved on the basis of what the closest prior art discloses, irrespective of any other definition of the skilled person suggested in the contested patent.

2. Since the technical problem addressed by an invention must be so formulated as not to anticipate the solution, the skilled person to be considered cannot be the appropriate expert in the technical field to which the proposed solution belongs if this technical field is different to the one considered when formulating the technical problem.

3. The appropriate skilled person's basic knowledge does not include that of a specialist in the different technical field to which the proposed solution belongs if the closest prior art gives no indication that the solution is to be sought in this other technical field.

Summary of facts and submissions

I. European patent No. 0 169 750 was granted in respect of European patent application No. 85 401 148.3 on the basis of nine claims, of which claims 1 to 5 related to a process for the production of security fibres, etc. and claims 6 to 9 to fibres produced according to such a process and to documents comprising such fibres. Claim 1 read as follows:

"Process for the production of security fibres, security threads, textile materials, plastic or regenerated cellulose films, natural, artificial or synthetic resins, luminescent because of the introduction of luminescent rare earth chelates, or chelates of yttrium or thorium, characterised by the fact that the introduction of luminescent chelates is effected at a stage subsequent to their production, in which said chelates have not been used, by a dyeing process comprising a liquid dye bath containing at least one of said luminescent chelates, and optionally a colouring agent for dyeing, dissolved in said dyeing bath."

II. The respondents (opponents) filed opposition to this patent, requesting its revocation on the grounds of lack of inventive step and insufficient disclosure of the invention (Article 83 EPC). During opposition proceedings the respondents also cited lack of novelty. However, they elected not to pursue their request for revocation on the ground of insufficient disclosure of the invention.

During opposition proceedings the following documents in particular were cited:

(0) EP-A-0 066 854

(3) "Synthesefasern, Grundlagen, Technologie, Verarbeitung und Anwendung", Verlag Chemie, 1981, pages 283-289, paragraph 7.3

(6) GB-A-713 351, and

(7) FR-A-1 522 465.

III. In a decision issued on 18 February 1993 and notified to the parties on 3 March 1993 the opposition division revoked the patent. In its decision the opposition division ruled that the process claimed met the condition of novelty, but not of inventive step.

Regarding novelty, the opposition division held that the process claimed differed from the process described in document (7) in that the chelates were introduced into the materials to be treated by a dyeing process, while in the known coating process they were applied to the surface of these materials.

Concerning inventive step, the opposition division held that document (0) represented the closest prior art. The process according to the invention was claimed to differ from the process described in document (0) essentially by virtue of the fact that it made it possible to make a material luminescent by the introduction of

luminescent rare earth chelates, or chelates of yttrium or thorium by a dyeing process instead of adding such chelates to the mass used to extrude this material. Given that the production of security fibres by treatment using fluorescent products was already known from document (6), and that it was known from document (7) that solutions containing at least one luminescent rare earth chelate could be used as liquid baths for the treatment of fibres, the process claimed was held to be obvious in the light of the state of the art.

IV. The appellant (patent proprietor) filed an appeal against this decision, essentially arguing that claims 1 to 5 as granted met the conditions of novelty and inventive step. ...

Reasons for the decision

1. The appeal is admissible.

Main request

2. Novelty

2.1 Document (7) is the only document cited during opposition and appeal proceedings as destroying the novelty of claim 1.

The respondents argued that this document destroyed the novelty of the subject-matter of this claim because this document described compositions containing at least one rare earth chelate dissolved or dispersed in a solvent (see claim 1, page 1, right-hand column, lines 29-39, page 2, left-hand column, lines 6 and 7, and right-hand column, lines 29 and 35) as well as the application of such

compositions to supports, for example on plastic films or threads (see page 2, left-hand column, lines 8-11, right-hand column, lines 14-15, and page 3, left-hand column, line 31). In view of the fact that in this context the qualifier "teinture(s)" ("dye(s)") had been used (see page 2, left-hand column, line 8, right-hand column, line 50, and page 3, left-hand column, lines 16-17), the respondents argued that all the characteristics of the process claimed were described in document (7).

While it is correct that the application of compositions containing at least one rare earth chelate dissolved or dispersed in a solvent is described in document (7), the board is unable to follow the respondents with regard to the interpretation of the term "dye" in the passage in question.

2.2 It should first of all be pointed out that the expression "dye" has at least two meanings, namely

- (a) a composition or substance suitable for dyeing, ie permitting the impregnation of a material with a colouring substance in the sense of a thorough penetration, and
- (b) a colouring agent (for example a substance, a liquid, a bath) serving to perform the operation of colouring a material, ie of giving it a colour (tint).

In view of the fact that (i) document (7) relates to **coating** compositions (see page 1, left-hand column, lines 1 to 7, and right-hand column, lines 22 to 28 and 29 to 33, and claim 1), (ii) it is stated several times in document (7) that the "dyes" are applied, placed or spread **on** supports (see page 2, left-hand column, lines 9-11, right-hand column, lines 49-53, and page 3, left-hand column, lines 16-20) and (iii) it is nowhere suggested that these "dyes" serve to achieve penetration of the colouring substance in the material treated, it follows that the expression "dye" in document (7) cannot be

interpreted as having the specific meaning of a composition suitable for impregnating the material to be dyed. On the contrary, it must be seen as having the far more general meaning of a composition serving to perform the operation of "colouring" a material by the application of the colouring agent (product) used (for example, paint, ink).

Since, on the one hand, the process according to claim 1 has the object of **introducing** luminescent chelates, which means nothing other than the incorporation of chelates into the material treated (see column 3, lines 6 to 13, of the contested patent) and, on the other hand, the materials to be treated and the colouring compositions used must fulfil different conditions depending on whether the purpose of the process in question is solely to produce a coloured coating or instead to introduce a colouring agent into the material itself, the characteristics of the process described in document (7) must of necessity be different from the characteristics of the process as claimed. This is confirmed by the fact that, during oral proceedings, the respondents no longer viewed the disclosure in example 6 of the cited patent as destroying its novelty. This is hardly surprising, since the bath used in this example contains a plastifying mixture characteristic of a paint. The board therefore concludes that document (7) can give no cause to question the novelty of claim 1.

None of the other documents cited discloses all the characteristics of the process according to claim 1. The process claimed is therefore viewed as being novel.

3. Inventive step

In the discussion of inventive step that follows, the expression "dye" is to be interpreted as meaning a composition or substance suitable for dyeing in line with

the definition given above under (a) (see point 2.2.).

3.1 In view of the fact that, on the one hand, the process claimed relates to the introduction of rare earth chelates into security fibres, etc. and, on the other, document (0) is the only document to describe a process in which such an introduction has already been achieved, the board regards document (0) as representing the closest prior art.

Document (0) is therefore considered as the most relevant starting point for an assessment of inventive step. This starting point was also the one chosen by the opposition division. It is also one of the two possibilities regarded as the starting point by the respondents.

3.2 Document (0) describes cellulose acetate fibres and threads containing lanthanide chelates homogeneously distributed in the mass and their preparation by mixing an acetic solution of cellulose acetate with an acetic solution of lanthanide chelate and extruding the mixture in a spinning process in the mass (see claims 1 and 12 and page 5, lines 1 to 8, of the description).

3.3 In the contested patent it is stated that the method of producing security fibres according to document (0) is subject to severe constraints since this process is not suitable for the production of small quantities of security fibres (see column 2, line 55 to column 3, line 5).

3.4 Based on the disclosure in document (0) the main problem faced was therefore to develop a different process for incorporating rare earth chelates, offering the possibility of arriving at production cycles compatible with the small quantities of security fibres employed by the industries which use them (see column 3, lines 14 to

22, of the contested patent).

3.5 According to the contested patent this problem is solved by a dyeing process according to claim 1 (see point I above).

Examples 1 and 2, which describe two embodiments of the process claimed, show credibly that the above technical problem has been effectively solved by the process as claimed, something which the respondents do not question.

3.6 It therefore remains to be considered whether the solution claimed involves an inventive step.

3.6.1 The opposition division took the view that, given the information found in document (0), the appropriate skilled person was an expert in the dyeing of fibres and that the technical problem to be solved therefore resided in replacing the incorporation of fluorescent chelates in the spinning mass by a standard process for dyeing pre-produced fibres. In view of the fact that the teaching of document (6) essentially corresponds to the solution to the problem posed, and that rare earth chelates are known from document (7), the opposition division concluded that the process as claimed was obvious from the state of the art (see point 2.2.3 of the contested decision).

In the present case, however, the principle of introducing a rare earth chelate by a dyeing process quite clearly forms part of the **solution** to the technical problem to be solved (see points 3.4 and 3.5 above). The expert in dyeing cannot therefore be the skilled person who was faced with the task of solving the problem, because the very fact of choosing to **introduce** rare earth chelates by a dyeing process is the essential feature of the solution proposed. The board consequently takes the view

that the skilled person faced with the task of solving the problem posed was not an expert in dyeing, but rather an expert in security materials who specialised in the marking (identification, authentication, etc.) and protection (against imitation, forgery or counterfeiting) of security documents and similar materials.

The board does not rule out the possibility that the opposition division, in its definition of the skilled person and the technical problem to be solved, was influenced by the following passage in the contested patent : "L'homme de l'art, en l'occurrence, l'expert en teinture de fibres ..." ("The skilled person, in this case the expert in the dyeing of fibres") (see column 2, lines 40 and 41).

From an objective viewpoint, however, this passage must be interpreted in the light of the content of the paragraph as a whole (see lines 40 to 49), which merely states that the solution proposed is not an obvious one, given that a dyeing process using rare earth chelates **was not known** in the state of the art.

The idea of introducing rare earth chelates by a process of dyeing security fibres, etc., at a stage subsequent to their production - the process defined in claim 1 - is the essential part of the teaching of the contested invention as reflected in the solution to the problem posed. The technical problem addressed by an invention must however be so formulated as not to contain pointers to the solution, since including part of a solution offered by an invention in the statement of the problem must, when the state of the art is assessed in terms of that problem, necessarily result in an **ex post facto** view being taken of inventive step (see T 229/85, OJ EPO, 1987, 237).

3.6.2 It remains to be considered whether the introduction of rare earth chelates by a dyeing process was suggested in either one of documents (6) and (7). ...

3.7 It follows from the above that claim 1 of the main request is held to satisfy the condition of inventive step required by Articles 52(1) and 56 EPC.

3.8 Claims 2 to 5, which relate to specific embodiments of claim 1, derive their inventive step from the patentability of claim 1.

4. The grounds for opposition according to Article 100 EPC therefore present no obstacle to the maintenance of the patent according to the main request. Under these circumstances there is no need to consider the auxiliary requests.

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 on the basis of the main request (see point VII).

* This is an abridged version of the decision. A copy of the full text in the language of proceedings may be obtained from the EPO Information Office in Munich on payment of a photocopying fee of DEM 1.30 per page.