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# D E C I S I O N
# of 15 April 1999

**Case Number:** T 0951/96 - 3.2.5

**Application Number:** 93924154.3

**Publication Number:** 0670920

**IPC:** D02G 1/18

**Language of the proceedings:** EN

**Title of invention:**
Making Textile Strands

**Applicant:**
J. & P. Coats, Limited

**Opponent:**
-

**Headword:**
-

**Relevant legal provisions:**
EPC Art. 123(2), 84, 56, 52(1)

**Keyword:**
"Added subject-matter (No - after amendent)"
"Inventive step (Yes - after amendment)"

**Decisions cited:**
-

**Catchword:**
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**Case Number:** T 0951/96 - 3.2.5

**D E C I S I O N**
**of the Technical Board of Appeal 3.2.5**
**of 15 April 1999**

**Appellant:** J. & P. Coats, Limited
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**Decision under appeal:** **Decision of the Examining Division of the European Patent Office posted 18 July 1996 refusing European patent application No. 93 924 154.3 pursuant to Article 97(1) EPC.**

**Composition of the Board:**

**Chairman:** H. P. Ostertag
**Members:** C. G. F. Biggio
J. P. B. Seitz

## Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal against the decision of the examining division, refusing the European patent application No. 93 924 154.3.

The examining division held that the subject-matter of Claim 1, as filed on 3 April 1996, had been amended in such a way as to contravene Article 123(2) EPC.

The examining division further held that the subject-matter of Claim 1, as filed with a letter dated 3 April 1996,

- did not mention some essential features, thereby not meeting the requirements of Article 84 EPC, and

- lacked novelty in respect of the prior art disclosed by document D1 = EP-A-0 037 118.

II. Together with the grounds of appeal the appellant filed a newly drafted Claim 1.

III. On 20 November 1998, the Board summoned the appellant to oral proceedings and joined to the summons a communication, indicating

- that some of the features and/or method steps mentioned in the newly drafted Claim 1 seemed to lack support by the originally filed disclosure, and

- that the novelty, respectively the inventive step, of a suitably further amended Claim 1 would have had to be appreciated with regard to the disclosure of, respectively the teaching from EP-A-0 057 583 (referred to as "document D0") representing the closest prior art on file, and the already mentioned document D1.

III. Oral proceedings, before the Board of Appeal, were held on 15 April 1999.

IV. The appellant filed a further amended Claim 1, which reads as follows:

"A method for making a coherent twist-free or low twist strand by overfeeding two filamentous strands (11,12) together through a jet device (13) which commingles filaments of the two strands and forms loops therein, the two strands being drawable, and the commingled strand being treated after the jet, characterised in that the strands (11,12) before entering the jet are not drawn or are incompletely drawn and that after leaving the jet the treatment of the commingled strands completes the drawing process and consolidation of the strands is effected or assisted by tightening brought about by the jet and the treatment after the jet".

The appellant, thus, requested that the decision under appeal be set aside and an European patent be granted on the basis of:

- Claim 1, as filed at the oral proceedings,

- Claims 2 to 8, as filed with letter dated 3 April

1996,

- description page 1 and 3 to 9, as originally filed, and page 2 with insert A, as filed at the oral proceedings,

- figures/drawings 1 to 3, as originally filed.

V. To support his request, the appellant argued essentially as follows:

The invention according to the pending application was an improvement of the well known method according to the closest prior art on file represented by document D0, as it was clearly stated in the application as originally filed (see paragraph on the middle of page 2) reading as follows: "The present invention provides methods for making a textile strand, which, while maintaining the flexibility of the method of EP 0 057 583 for the production of different specifications of strand, especially in the context of sewing thread, gives, at the same time, the possibility of substantial cost reduction in the process".

With reference to the pending application as filed (see e.g. page 4, lines 10 to 16; page 5, lines 11 to 25; page 8, 15 to 18), it was submitted that the preamble of the further amended Claim 1 did mention only and exclusively those method steps which were common to both the method according to document D0 and the method according to the pending application, while the characterising clause of said claim did mention those method steps which, with reference to the method according to document D0, had been modified in the

method according to the pending application. It was, accordingly, submitted that the subject-matter of Claim 1, as presently effective, did not contravene Article 123(2) EPC.

It was, then, submitted that the subject-matter of said Claim 1 was novel and involved an inventive step over the methods respectively disclosed by both documents D0 and D1. In respect of said documents, the following submissions were made.

In the method according to document D0, an essential method step was that of overdrawing the strands before overfeeding and passing them into the jet device. This method step was there essential, because the method according to document D0 essentially relied on the high shrinking ratio provided by the previously effected overdrawing of the strands, when the latter were subsequently submitted to the heating step foreseen by said method; said high shrinking ratio providing for the consolidation of the strands by tightening the loops provided on the strands by the commingling action of the jet device. The method according to document D0 suffered, however, of the limitation imposed by the jet device, so that the final speed of production of the consolidated strand was limited to that with which the unconsolidated strands might pass through the jet device.

In the method according to the pending application, the method step of overdrawing the strands, before overfeeding and passing them into the jet device, was totally or at least partially dispensed with. Thus, the method according to the pending application did not

rely on shrinking ratios for providing for the final consolidation of the strand, but merely on the tightening of the loops provided by the commingling jet device into the unconsolidated strands, when the latter were finally submitted to a drawing step intended to be either the sole drawing to which the strands were submitted, or to complete their drawing, when the strands were submitted to an incomplete drawing before entering the jet device.

The final drawing step to which the strands were submitted after they had passed the jet device, as foreseen by the method according to the pending application, allowed high quality strands to be produced at a final higher speed which was no more dependent on and limited to that with which the strands might pass through the jet device. The object of the invention, i.e. to reduce the cost of the producing process was, thus, achieved.

In the method according to document D1 there was no formation of loops at all when the strands passed through the jet device, so that said method had nothing to do with the method according to the pending application. Consequently, said method could not provide the person skilled in the art with any hint addressing him to the method steps of the claimed method, namely to the method steps defined by the characterising clause of Claim 1.

## Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1. In respect of Claim 1 as originally filed, the presently effective Claim 1 shows the differences indicated in the following quotation thereof between square brackets and in bold characters.

"A method for making a [**coherent twist-free or low twist**] strand [**by overfeeding**] two filamentous strands (11,12) together through a jet device (13) which commingles filaments of the two strands [**and forms loops therein, the two strands being drawable, and the commingled strand being treated after the jet, characterised in that the strands (11,12) before entering the jet are not drawn or are incompletely drawn and that after leaving the jet the treatment of the commingled strands completes the drawing process and consolidation of the strands is effected or assisted by tightening brought about by the jet and the treatment after the jet**]".

2.2. The specification "**coherent twist-free or low twist**" does not represent any added subject-matter, because such a specification is, for any person skilled in the art, implicitly contained in the second paragraph on page 1 of the application as originally filed; namely in the second sentence of said paragraph.

The addition "**by overfeeding**" does not represent any added subject-matter, because such an addition is clearly disclosed in the application as originally filed, e.g. in the first paragraph on page 3.

The same paragraph, together with the third paragraph on page 6 and the paragraph on page 7 which deal with Figure 3, provides also for support to both the additions: "**the two strands being drawable**" and "**the strands (11,12) before entering the jet are not drawn or are incompletely drawn**", respectively mentioned in the preamble and in the characterising clause of the presently effective Claim 1. These additions, consequently, do not represent any added subject-matter.

The addition "**and forms loops therein**", in the preamble of the presently effective Claim 1, is duly supported by the disclosure of Figures 1 and 2, on page 4 (see lines 10 to 16 thereof) of the application as originally filed.

In the disclosures dealing with Figures 1 to 3, it is specified that the commingled strand is further submitted to a drawing step in the drawing stage 14. Said drawing stage 14 is represented in all the Figures 1 to 3 as located after the jet device. Thus, the additions "**the commingled strand being treated after the jet**" and "**after leaving the jet the treatment of the commingled strands completes the drawing process and consolidation of the strands is effected or assisted by tightening brought about by the jet and the treatment after the jet**" are duly supported by these disclosures, together with the sentence: "Consolidation of the thread is effected, or at leats assisted, by the commingling effect of jet 13 and the subsequent tightening brought about by the process after the jet" (see page 8, lines 16 to 19 thereof).

2.3. The Board is, accordingly, satisfied that the presently effective Claim 1 does not contain any added subject-matter and meets, thus, the requirements of Article 123(2) EPC.

The Board is also satisfied that the invention claimed by the pending application is an improvement of the method according to document D0, which, consequently represents the closets prior art on file.

3. *Novelty*

The Board finds that the subject-matter of the presently effective Claim 1 is novel over both the disclosure of documents D0 and D1. The reasons of this finding are the following.

3.1. Over document D0

In the method according to document D0, an essential method step is indeed that of overdrawing the strands before overfeeding and passing them into the jet device. This method step is essential for that invention, because the method according to document D0 essentially relies on the high shrinking ratio provided by the previously effected overdrawing of the strands, when the latter are subsequently submitted to the heating step foreseen by said method; said high shrinking ratio providing for the consolidation of the strands by tightening the loops provided in the strands by the commingling action of the jet device. Contrary to this teaching, in the method according to the pending application, the method step of overdrawing the strands, before overfeeding and passing them into the

jet device, is indeed totally or at least partially dispensed with. Thus, the method according to the pending application does not rely on shrinking ratios for providing for the final consolidation of the strand, but merely on the tightening of the loops provided by the jet device into the commingled strands, when the latter are finally submitted to a drawing intended to be either the sole drawing to which the strands are submitted, or to complete the drawing, when the strands are submitted to an incomplete drawing before entering the jet device.

3.2 Over document D1

This document discloses a method for providing a bulky flat yarn by overfeeding two drawable filamentous strands having different material draw ratios through an interlacing air nozzle, drawing the strands simultaneously either before or after the air nozzle in such a way that the filaments of the strands adopt different elastic recovery, and releasing the tension so that bulk is developed.

It is to be noted that the interlacing air nozzle only effects an entangling and mixing of the filaments of the two strands without any formation of loops, whereby a bulky yarn of silky touch is obtained, which does not have any such crimps, which are usually created by known texturing operations as false-twisting or air-jet-texturing (see page 2, lines 13 to 18).

Said method has, accordingly, nothing to do with the method according to the pending application.

4. *Problem and solution*

As already stated, the Board is satisfied that the method according to document D0 represents the closest prior art on file and that the method according to the pending application is an improvement of said known method.

The Board is also satisfied that the method according to document D0 suffers indeed of the limitation imposed by the jet device, so that the final speed of production of the consolidated strand is limited to that with which the component strands may pass through the jet device.

The Board, thus, concludes that the problem to be solved by the invention according to the pending application is indeed that of remedying the above drawback, without changing the general appearance and the properties of the strands obtained by the method of document D0.

The Board is satisfied that the final drawing to which the strands are submitted after they have passed the jet device, as foreseen by the method according to the pending application, allows strands of the desired quality to be produced at a final higher speed which is no more limited to that with which the strands may pass through the jet device. The object of the invention, i.e. to reduce the cost of the producing process is, thus, achieved, thereby providing for the solution of the above-stated problem, i.e. remedy the drawback of the closest prior art on file.

5. *Support by the description*

The Board is satisfied that the presently effective Claim 1 mentions all the features and/or method steps which, in the application as originally filed, were disclosed as essential for the claimed method.

Said claim meets, thus, the requirements of Article 84 EPC.

6. *Inventive step*

As already mentioned (see previous item 3.1), the method steps mentioned in the characterising clause of Claim 1 are contrary to the teaching of document D0. The person skilled in the art, accordingly, cannot find in said document any hint addressing him to such method steps.

The person skilled in the art cannot find any hint addressing him to such method steps in document D1 either.

The reason thereof is that in the method according to said document there is no formation at all of any loops, when the strands pass through the jet device and that the drawing step serves a different purpose: in the method of document D1 the drawing step imparts a latent bulk to the yarn which is developed upon removal of the stress, so that a bulky yarn is obtained. Contrary to this, in the method of presently effective Claim 1, the drawing after the jet affects tightening of the loops provided by the air nozzle and consolidation of the strand.

Thus, even if document D1 teaches to carry out the drawing step after the interlacing step, this teaching does not lead a person skilled in the art to replace the shrinkage step of document D0 by the drawing step.

The subject-matter of the presently effective Claim 1 involves, accordingly, an inventive step pursuant to Article 56 EPC and is, thus, to be considered as patentable pursuant to Article 52(1) EPC.

## 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 grant a patent in the following version

- Claim 1 as filed during the oral proceedings,

- Claims 2 to 8 as filed with letter dated 3 April 1996,

- Description pages 1, 2 to 9 as originally filed

- Description page 2 with insert A as filed during the oral proceedings,

- Figures/Drawings 1 to 3 as originally filed.

The Registrar: The Chairman:

A. Townend H. Ostertag