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**D E C I S I O N**  
**of 18 June 2002**

**Case Number:** T 0313/00 - 3.2.6

**Application Number:** 93830466.4

**Publication Number:** 0599789

**IPC:** B65H 75/10

**Language of the proceedings:** EN

**Title of invention:**

Roll of self-adhesive tape made from plastic or equivalent film, wound on a tubular core of reduced diameter

**Patentee:**

SYROM 90 S.p.A.

**Former Opponent:**

Beiersdorf Aktiengesellschaft

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 123(2), (3), 52(1), 4(1), 56, 102(3), 111(1)

**Keyword:**

"Main request - inventive step (no)"

"First auxiliary request - admissibility (no)"

"Second auxiliary request - novelty and inventive step (yes)"

**Decisions cited:**

T 0789/89

**Catchword:**

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Case Number: T 0313/00 - 3.2.6

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.6**  
**of 18 June 2002**

**Appellant:** SYROM 90 S.p.A.  
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**Representative:** Mannucci, Gianfranco, Dott.-Ing.  
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**Representative:** -

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 3 February 2000  
revoking European patent No. 0 599 789 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** P. Alting van Geusau

**Members:** G. C. Kadner

M. J. Vogel

## Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 599 789 in respect of European patent application No. 93 830 466.4 filed on 24 November 1993 and claiming an Italian priority from 24 November 1992 was published on 5 November 1997.

II. Notice of opposition was filed on 3 July 1998 on the grounds of Article 100(a).

The Opponent relied upon an alleged prior use of a roll of self-adhesive tape, and filed the following documents as evidence:

(A2) Attachment 2: Kernrohrverzeichnis (List of Core Tubes) tesa-Werke Offenburg dated 30.09.91

(A4) Attachment 4: tesa Klebeband Programm (tesa Programm of Self-adhesive Tapes) dated 9.83

(A5) Attachment 5: tesa Preisliste Industrie (tesa Price List Industry) 1980/81

It further cited:

(A3) Attachment 3: DIN 40631 from January 1968, Selbstklebende Isolierbänder, Maße (Self-adhesive Insulating Tapes, Dimensions).

III. By decision posted on 3 February 2000 the Opposition Division revoked the European patent 0 599 789. It

based its decision on the closest prior art according to "Scotch Brand TM Mailing tape" acknowledged in the description of the patent in suit which was similar to "Scotch" Klebeband Packstark, cited during examination proceedings and disclosed in

(D1) A letter from the company 3M with an enclosed photocopy of page 1.2.52 of a leaflet issued December 1989.

The Opposition Division was of the opinion that the evidence provided by the Opponent in support of an alleged public prior use was not sufficient so as to prove without any doubt that the winding core diameter according to product No. 4970 mentioned in Attachment 2 was in the order of 38,2 mm. In respect of the combination according to claim 1 of the patent in suit, however, its subject-matter did not meet the requirements of Article 56 EPC. Starting from the closest prior art which was considered to be "Scotch Brand TM Mailing tape" having a core diameter of 38 mm (1,5"), and with the knowledge of the standard tape lengths of the relevant norms the skilled person would arrive at the claimed subject-matter without the exercise of an inventive step. The standard lengths of tape included in the DIN norm 40631 (A3) and the AFERA standards 3100 and 3130, the latter submitted by the Appellant during examination proceedings, reached up to 100 m which was within the claimed range of 40 m to 220 m. There was no technical prejudice to wind "long length" of tape onto such a core of reduced diameter if a longer length of tape was required.

IV. On 28 March 2000 a notice of appeal was lodged against the decision of the Opposition Division. The appeal fee

was payed on the same date.

The statement of grounds of appeal was filed on 30 May 2000.

Besides other documents concerning the commercial success of its product the Appellant (Patentee) filed:

- (E1) Exhibit 1: AFERA Standard 3130 (already filed during the examining proceedings)
- (E2) Exhibit 2: AFERA Standard 3100 (already filed during the examining proceedings)
- (E3) Exhibit 3: AFERA Active Member List
- (E4) Exhibit 4: Schematic View of a Rewinding Machine
- (E5) Exhibit 5: Longitudinal Section of Two Winding Mandrels.

V. The Respondent (Opponent) did not submit substantive statements in the appeal proceedings, and withdrew its opposition with letter dated 23 October 2000.

VI. Oral proceedings were held on 18 June 2002.

The Appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request);

auxiliarily:

- that the patent be maintained on the basis of the claim according to the first auxiliary request;

further auxiliarily:

- that the patent be maintained on the basis of the claim according to the second auxiliary request.

The claims according to each request read as follows:

Main request:

"Roll of self-adhesive tape made from plastic or equivalent film wound on a tubular core of board or equivalent, in which the diameter of the tubular core is in the order of 38,2 mm, characterized in that the length of the tape is between 40 m to 220 m".

First auxiliary request:

"Roll of self-adhesive cardboard boxes packaging tape made from plastic wound on a tubular core of board or equivalent, having a width between 35 and 80 mm, in which the diameter of the tubular core is in the order of 38,2 mm, characterized in that the length of the tape is between approximately 105 m and 220 m" and the external diameter of the roll is between 100 and 120 mm.

Second auxiliary request:

"Roll of self-adhesive cardboard boxes packaging tape made from plastic wound on a tubular core of board or equivalent, in which the diameter of the tubular core is in the order of 38,2 mm, characterized in that the

length of the tape is between approximately 105 m and 220 m" and the external diameter of the roll is around 120 mm.

VII. The submissions of the Appellant in support of its request are summarized as follows:

Up to the priority date of the patent in suit cores of a small diameter were foreseen for short lengths of adhesive tape in the range of 10 m to 33 m whereas cores of a large diameter had been used for longer lengths of adhesive tape of 66 m to 1000 m.

The consensus agreement between the producers of adhesive tapes to these dimensions was not only based on the sake of convenience for users when using tape handling devices, but had also a technical background which was influenced by the method of winding the tapes onto the cores. Caused by the increasing winding diameter during the winding process and the required torque transmission to the winding core, it would be very difficult to wind long lengths of tape on small cores, and therefore in addition to the usually produced rolls of packaging tapes a technical prejudice existed which hindered the skilled person from following the approved way. It was the merit of the invention to overcome this problem by the selection of distinct parameters thus providing the new and unexpected solution involving several advantages which lead to an extraordinary commercial success.

The claimed ranges of tape lengths and diameters of the auxiliary requests were clearly derivable from the disclosure of the patent as granted as well as from the application as originally filed. Since for the same

external diameter the preparation of a roll of tape with a length of up to approximately three times that of a conventional roll was described, in accordance with the case law of the Boards of Appeal, the value of approximately 105 meters being three times the disclosed value of 35 meters was allowable. The range of external diameters was disclosed in figures 1, 2, 4 and 5 as originally filed showing rolls in the scale of 1:1.

### **Reasons for the Decision**

1. The appeal is admissible.
  
2. *Alleged prior use*
  - 2.1 Since the opposition was withdrawn the Respondent is no longer a party in the appeal procedure (see also decision T 789/89, OJ EPO 1994, 482), and no further evidence in respect of the alleged prior use can be gained from this source.
  
  - 2.2 The Board agrees with the conclusion of the Opposition Division that the evidence submitted in respect of the alleged prior use was insufficient so as to prove unambiguously the public prior use of a roll of self-adhesive tape including the features of the claim according to the main request. Therefore the Board adopts the reasons in the Opposition Division's decision, point 1.1, and makes it part of its decision. Because of this lack of substantiation the alleged prior use cannot be taken further into account.
  
3. *Main request*



In its decision the Opposition Division concluded that the subject-matter of the granted claim lacked an inventive step. The Board agrees with this conclusion in particular in view of the broad range of lengths of tape from 40 m to 220 m claimed.

When starting from a roll of self-adhesive tape wound on a core of board having a diameter in the order of 38,2 mm as disclosed in D1 under the specification ' "Scotch" Klebeband Packstark braun' containing a tape length of about 20 m, no inventive activity can be seen in winding a longer length or simply a multiple of 20 m of tape on such a core if a longer length is needed thus arriving at the claimed subject-matter, when considering the lower part of the claimed range thus for example a tape having a length of 40 m.

The Appellant's argument with respect to a prejudice clearly does not apply to lengths in the lower part of the claimed range. According to A3 (DIN 40 631) even on a smaller core of about 26 mm diameter a tape length of 33 m can be wound without difficulties. Therefore winding only 7 m more on a larger core of 30 mm (1,5 inch) cannot lead to the technical difficulties referred to by the Appellant. In this respect it is to be noted that the Appellant focussed on longer lengths of 100 m and more when relying on a prejudice based on technical difficulties for winding tape on small cores.

Since the subject-matter of the claim is arrived at in an obvious manner the subject-matter of the main request lacks an inventive step (Article 56 EPC).

4. *First auxiliary request*

The claim according to this request is restricted to the external diameter of the roll being between 100 and 120 mm. However, the Board does not see sufficient support in the patent as granted and in the originally filed application for the disclosure of such a range. In the patent specification (column 1, lines 16 to 17; line 50) external diameters of the prior art rolls and of that according to the invention of 12 cm and 120 mm are mentioned. The scale of the figures 3 to 5 is obviously not the original 1:1 because the dimension of about 12 cm is reduced to about 10 cm when compared with the originally filed figures. Furthermore these figures show only distinct diameters of rolls without any indication of the specific length of tape or that these examples would be selected from the range now claimed. In addition, when having regard to figure 3, the diameter of that rolls falls fully outside of the range of 100 and 120 mm. No example in the application as originally filed is given of the feature that the external diameter of the roll is between 100 and 120 mm.

Since the range now claimed of the external roll diameter included in the claim thus extends over the content of the application as originally filed this claim violates Article 123(2) EPC and is therefore not admissible.

5. *Second auxiliary request*

5.1 Admissibility

The amendments of the claim are supported by the patent specification (column 1, lines 12 to 17 in connection with lines 49 to 52) (see also original application,

page 1, lines 15 to 19 and 18 to 23). The description of the prior art is linked to that of the invention in that for the same external diameter three times the length of tape can be wound on the core. Since the lower limit of tape length according to the prior art is defined as being around 35 m that value multiplied by three results in about 105 m in accordance with the invention.

Since the additional features also restrict the scope of the claim the amendments are admissible under Article 123(2) and (3) EPC.

## 5.2 Novelty

D1 discloses a roll of self-adhesive cardboard boxes packaging tape made from plastic wound on a tubular core of board or the like which is similar to the "Scotch Brand 3M TM Mailing tape" mentioned in the introduction of the patent description, in which the diameter of the core is in the order of 38,2 mm according to the pre-characterising portion of claim 1. The length of tape wound on it is 20,3 m. The subject-matter of claim 1 differs from this roll in that the length of tape is between approximately 105 m and 220 m and its external diameter is around 120 mm.

In A3 winding core diameters of 26 mm, 51 mm, 76 mm and 34 mm are mentioned. The respective lengths of tape reach up to 33 m (or integer multiples), 100 m and 25 m (page 2). The claimed roll differs from these core dimensions by its core diameter of the order of 38,2 mm.

E2 deals with adhesive tapes wound on cores of 1"

(25,4 mm) diameter and having lengths of 10 m, 15 m, 20 m, 25 m and 33 m. The subject-matter of claim 1 differs from these dimensions by its core diameter in the order of 38,2 mm (1,5") and the tape lengths of approximately 105 m to 200 m.

According to E1 the winding cores have a diameter of 3", and the lengths of the tapes are 66 m, 100 m, 1000 m. The difference of the claimed roll of tape in respect of the known dimensions is again its core diameter in the order of 38,2 mm (1,5").

Since none of these documents discloses all features of the tape roll according to the claim its subject-matter is new and meets the requirements of Article 54(1) EPC.

### 5.3 Inventive step

5.3.1 In the patent in suit a tape roll is discussed as prior art which is known under the name "Scotch Brand 3M TM Mailing tape" (column 1, lines 6 to 7). The respective closest state of the art is represented by D1 which discloses a roll of self-adhesive tape having a core diameter of 1,5" in accordance with the subject-matter of the preamble of claim 1.

5.3.2 The Opposition Division was of the opinion that in the special branch of tape manufacturers there was no specific correlation between small core diameters with short lengths of tape and large core diameters with long length of tape, and therefore no prejudice had to be overcome for winding longer lengths of tape on small cores.

5.3.3 In its argumentation the Appellant stressed that the

consensus agreement between tape manufacturers which is laid down in the industrial standards is not only based on the convenience of tape dimensions for use by the customers but had also an important technical background. In the absence of proof to the contrary the Board accepts the arguments submitted by the Appellant relating to the process of winding tape on a core. A skilled person who is experienced in the winding technology of tape would wind a short length of tape on a small winding core driven by a small diameter winding mandrel because this does not require a high torque transmission. On the other hand, for winding a long length of tape a high torque transmission is needed and would require driving a large diameter core by a large diameter winding mandrel. Following the explanation of the Appellant the skilled person would expect severe technical difficulties if he would try to wind a long length of tape on a small core because the torque transmission would be insufficient. For these reasons the existence of a prejudice for using cores smaller than 76 mm for winding lengths of tape longer than 66 m (see E1) can be acknowledged.

- 5.3.4 The Board considers the objective problem, starting from a tape roll according to D1 to provide a more economic roll of packing tape, in particular as regards space requirement, costs of shipping and storage as well as ecological problems (see the patent in suit column 1, lines 21 to 42). If for overcoming the limitation of the packing tape roll of D1 a longer length of tape was required, the skilled person would usually have taken a large diameter core (see point 5.3.3) with the result of an even larger external diameter which is inconvenient to handle and store. Since none of the prior art documents gives any

indication to deviate from the conventional rule: small diameter - short length or large diameter - long length, the idea to try a core of substantially reduced diameter for lengths of tape in the range of approximately 105 to 220 m and keeping the external diameter the standard 12 cm leading to a roll solving the underlying problem in a surprisingly simple manner was not obvious.

For these reasons the roll of self-adhesive tape according to the claim involves an inventive step and thus meets the requirements of Article 56 EPC.

- 5.4 The tape roll of the claim being also industrially applicable the Board arrives at the conclusion that the claimed subject-matter is patentable in accordance with Article 52(1) EPC, and that the patent can be maintained as amended.

## **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 maintain the patent on the basis of the following documents:
  - the claim of the second auxiliary request, filed during oral proceedings,
  - description and drawings as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau