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**D E C I S I O N**  
of 25 October 1995

**Case Number:** T 0041/94 - 3.2.2

**Application Number:** 86305257.7

**Publication Number:** 0223326

**IPC:** B30B 9/30

**Language of the proceedings:** EN

**Title of invention:**

A system for compacting textile fibres

**Patentee:**

LUMMUS INDUSTRIES, INC.

**Opponent:**

- 01 HOECHST Aktiengesellschaft  
02 Autefa Maschinenfabrik GmbH Augsburg  
03 Fleissner GmbH & Co. Maschinenfabrik

**Headword:**

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**Relevant legal provisions:**

EPC Art. 54(2), 56

**Keyword:**

"Prior use not available to the public"  
"Inventive step (confirmed)"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0041/94 - 3.2.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.2  
of 25 October 1995

**Appellant:**  
(Opponent 01)

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**Decision under appeal:** Interlocutory decision of the Opposition Division  
of the European Patent Office dated 10 November  
1993 concerning maintenance of European patent  
No. 0 223 326 in amended form.

**Composition of the Board:**

**Chairman:** H. J. Seidenschwarz  
**Members:** M. G. Noël  
M. K. S. Aúz Castro

### Summary of Facts and Submissions

- I. European patent No. 0 223 326 was granted on 10 October 1990 upon an application filed on 8 July 1986, claiming a US priority of 17 October 1985.
- II. Three oppositions were filed against the grant of the patent. In an interlocutory decision dated 10 November 1993 the Opposition Division decided to maintain the patent as amended, on the ground that no prior art suggested a cross-transfer shuttle capable of moving transversely or reciprocately through each of the stations of a system for compacting textile fibres and of carrying two bins simultaneously, one of the bins being able to be temporarily stored in an intermediate fixed position on the transverse path of the shuttle.
- III. The prior art considered comprised, in particular, the following documents:
- (1) the Port-a-Bin Staple Baling System brochure, Lummus, published in Fiber World, April 1985;
  - (2) EP-A-0 014 923, and the patents of the same family, namely, DE-A-2 906 229, DE-A-2 911 958 and US-A-4 372 101;
- and the contention of prior uses based on various tenders by the firm Autefa (Augsburger Textilmaschinenfabrik), including:
- (T1) tender No. 22 717 for a baling press to Rhône Poulenc Textile S.A., with a technical specification dated 14 September 1978 and drawing No. 32 000.415.11;

(T3) tender dated 27 May 1982 for a baling press to Neftochim (Bulgaria), accompanied by drawing No. 32 000.428.8 and based on an earlier tender No. 23 259 dated 5 March 1979 to Neumag (Neumünster) and accompanied by drawings No. 32 000.428.1, Bl. 1 and 32 000.428.1, Bl 2.

IV. The Appellant (Opponent 01) filed an appeal against the Opposition Division's decision on 19 January 1994, paid the fee on the same day and submitted a Statement of Grounds by letter dated 17 March 1994.

V. Oral proceedings were held on 25 October 1995 at the request of the parties. Opponent 02, a party to the appeal proceedings as of right, was also present at the oral proceedings.

Following discussion of clarity and support of the claimed subject-matter with respect to the application as originally filed, the Respondent filed an amended Claim 1 and a corresponding amended introduction to the description.

Claim 1 in suit reads as follows:

"A system for compacting textile fibres, said system comprising at least one fibre filling station (17), a compression station (10), a plurality of upwardly opening portable bins (11), which can be filled with fibre at said at least one station (17), and move to said compression station (10) and a transfer arrangement, to move the bins between said stations, said transfer arrangement further comprising:-

(a) a first dedicated transporter (19) for moving individual full bins (11') individually from a first position adjacent a filling station (17) to a second position adjacent said compression station (10);

(b) a second dedicated transporter (21) for moving empty bins (11) individually from a third position adjacent said compression station (10) to a fourth position adjacent said filling station (17); and

(c) cross-transfer means (18) located at each filling and compression station (17, 10) for moving a bin (11, 11') into said station from one of said second or fourth positions adjacent said station and moving a bin from said station to another of said third or first positions adjacent said station said cross-transfer means comprising a cross-transfer shuttle (18) mounted so as to reciprocate along cross-transfer shuttle rail tracks (24, 26) disposed on each side of the bin in each station and said cross-transfer shuttle being adapted to carry bins to and from the second and first transporters respectively, and intermediate fixed supports (56) between the second and first transporters and the compression or filling stations, in each of which a bin may be temporarily stored, while the cross-transfer shuttle moves along the tracks without that stored bin, the cross-transfer shuttle being capable of transporting an empty bin and a full bin simultaneously."

VI. The arguments of the parties were as follows:

- (i) The Appellant and the party to the proceedings as of right submitted that, having regard to the combination of the disclosures made in documents (1) and (2) and taking account of the technical general knowledge of a person skilled in the art, the subject-matter of Claim 1 did not involve an inventive step. Document (1) disclosed the general structure of the system and the underlying principle of the solution as claimed, in particular a shuttle capable of moving reciprocately between two transporters and of stopping temporarily at filling or compression

stations and, where appropriate, in intermediate positions. Document (2) disclosed that it was possible to provide intermediate storage positions on the bin-transporting circuit (cf. page 7, first paragraph). The possibility of simultaneously transporting two bins, one empty and the other full, was merely a design feature within the capabilities of the person skilled in the art and dependent on how operation of the system was programmed.

- (ii) The party to the appeal proceedings, furthermore, relied on the prior use T3 alleging that the drawings for T3 disclosed the possibility of a shuttle being stationed in an intermediate position on fixed supports.
  
- (iii) The Respondent replied that document (1) was merely a very simplified representation of a model and was not operational. It was impossible to deduce from this diagrammatic representation the existence of two transporters in the longitudinal arms or of a shuttle in each transverse arm of the system. Furthermore document (1) did not disclose the possibility of carrying a plurality of bins on the same shuttle or of storing them temporarily at a station or in an intermediate position on the transverse arm considered. Likewise, the system described in document (2) did not provide an intermediate stationing position on the bin-carrying circuit through the stations, so this feature could not have been suggested by the prior art. The invention offered greater flexibility than the known systems, since it provided more bin movement sequencing options, in particular the

possibility of simultaneously moving an empty bin and a full bin or of storing them temporarily in an intermediate position so as to reduce dead time.

VII. The Appellant and the party to the proceedings requested that the decision under appeal be set aside and that the European patent be revoked.

The Respondent requested that the appeal be dismissed and that the patent be maintained on the basis of Claims 1 to 12, the adapted description (column 1, pages 2, 2a, columns 3 to 7) and the drawings 1 to 8, all filed during the oral proceedings.

#### **Reasons for the Decision**

1. The appeal is admissible.
2. *Amendments*

The amendments made to Claim 1 do not extend the subject-matter of the patent beyond the content of the application as filed (Article 123(2) EPC).

In particular, the word "dedicated" has been reintroduced before the word "transporter" (features (a) and (b)) in conformity with the wording of the original Claim 1.

In feature (c) of Claim 1:

- the expression "characterised in that" has been deleted to emphasize that the invention combines all the features and because the two-part form of



the claim is not regarded as appropriate with respect to the not clearly defined state of the art disclosed by document (1) which represents the closest prior art (cf. point 4.2 below);

- the word "rail" inserted before "tracks (24, 26)" is duly supported by the original application (cf. page 6, lines 24 to 28; Claim 7 and Figures 1 and 6), since the "T-shaped tracks" mentioned in the description for the use of the cross-transfer shuttle may also be called "rail tracks";
- the expression "intermediate positions" has been replaced by the expression "intermediate fixed supports (56)" in conformity with the application as filed (cf. page 10, lines 29 and 30);
- the expression "in each of which a bin may be temporarily stored" is now followed by "while the cross-transfer shuttle moves along the tracks without that stored bin". This phrase is not explicitly supported by the original application but it does emerge clearly from the sequence of operations described in the passage on page 10, lines 25 to 32, in particular from the expression "the cross shuttle will then move ..." (line 31).

By comparison with the wording of Claim 1 as granted, the amendments made in the form of additions are such as to restrict the extent of the protection and, therefore, do not contravene the requirements of Article 123(3) EPC.

The amendments to the introduction to the description are made with the view to adapt the description to the new amended Claim 1 and to introduce document (1) as being the closest prior art.

3. *The invention*

In the compacting system according to the invention, all the filling stations and the compression station are aligned on the same line (the "centre line"). The bin-carrying system, which is symmetrical to this line, has a rectangular frame with straight longitudinal and transverse arms.

On the longitudinal arms there pass transporters which run reciprocally on rails in order to bring the full bins from a point adjacent the filling stations to a point adjacent the compression station and, conversely, to bring the empty bins from a point adjacent the compression station to a point adjacent the filling stations.

The transverse arms pass through the stations and carry cross-transfer shuttles which also run reciprocally on rail tracks to transfer the bins across from one transporter rail track to the other opposite, parallel transporter rail track, passing through a station during the transfer operation, so that the empty bins enter a filling station or leave the compression station while the full bins leave a filling station or enter the compression station.

The suspended bins, which are cross-transferred from the transporters to the shuttles or vice versa, therefore run on a closed circuit between the four positions forming the vertices of the rectangular frame of the system and defined by features (a) and (b) of Claim 1.

In addition, each shuttle is designed to transport two bins simultaneously on the transverse arm considered; one of the bins may be empty and the other full, according to the position of the shuttle relative to the

station. As it runs reciprocately on a transverse arm between the longitudinal arms, each shuttle may stop and temporarily store one bin in an intermediate (or waiting) position on an intermediate fixed support and one bin in a central position at a station on a central support for the purposes of a filling or compression operation. Furthermore, when one bin is stored in an intermediate position, it does not disrupt the subsequent to and fro movements of the shuttle on the transverse arm in question.

All the transporter and shuttle movements, in particular the various shuttle positions on the transverse arms, are controlled by a microprocessor. This means that all the movements can be regulated in sequence, which makes it possible to optimise the use of the compression station press at its maximum capacity and to reduce the dead time in any of the stations (cf. patent, column 2, lines 53 to 63).

4. *Prior art and novelty*

- 4.1 Contrary to the decision of the Opposition Division which considered the prior use concerning tender T1 to be the closest prior art, in the Board's judgment, the prior uses based on tenders T1 and T3 submitted by Autefa are not forming state of the art within the meaning of Article 54(2) EPC.

Tender T1 of 14 September 1978 has a delivery date taking effect after receipt of the order and finalisation of the technical and commercial details (cf. page 5). But no evidence has been produced of the press actually having been ordered and delivered; the tender therefore amounts to mere negotiation prior to the performance of the contract, entailing an implicit secrecy agreement binding the two business partners in

question until such time as the press was manufactured and delivered and as long as there was a common concern for secrecy (T 830/90, OJ EPO 1994, 713, points 3.2.1 and 3.2.2).

The same applies to tender T3 of 27 May 1982 to Neftochim, which was based on the earlier tender of 5 March 1979 to Neumag; this was only a project under consideration and negotiation with the Bulgarian authorities, which does not mean that the information about tender T3 was then available to the public.

Besides, in each of these tenders, there is no disclosure of a shuttle or reciprocating device operating in the sense of the patent in suit.

- 4.2 Document (1) represents the prior art closest to the invention in view of its structural similarity to the subject-matter of the contested patent. The leaflet forming document (1), however, has practically no description of the system or the way it operates. It is therefore possible to obtain information only from the simplified representation of the model.

Document (1) unequivocally shows a system for compacting textile fibres, comprising at least one fibre filling station, a compression station, a plurality of upwardly opening portable bins, which can be filled with fibre at said filling station and move to said compression station, a transfer arrangement to move the bins between said stations and comprising a first dedicated rail transporter for moving full bins individually from a first position adjacent a filling station to a second position adjacent the compression station, a second dedicated rail transporter for moving empty bins individually from a third position adjacent the compression station to a fourth position adjacent said

filling station, and cross-transfer means for moving a bin, along rail tracks disposed on each side of the bin in each station, into said station from one of said second or fourth positions adjacent said station and from said station to another of said third or first positions adjacent said station.

Although document (1) does not say so explicitly, it is clear that the cross-transfer means serving the filling station, as shown on the right-hand side of the model, is a shuttle which is capable of moving reciprocately through the station between the two opposite transport rails in order to be able to receive the bin suspended on the second transporter, which is partly visible at the rear of the model. It is also clear that a shuttle identical to that shown serves each filling or compression station. Otherwise the system would not be operational, and the symmetrical rectangular frame of the carrying system would be useless.

On the other hand, there is no evidence that there are intermediate waiting positions for the bins on the transverse arms between the transporter rails and the stations, nor that the shuttle is capable of carrying a plurality of bins simultaneously.

4.3 The subject-matter of Claim 1 of the contested patent differs therefore from the known system by the following features:

- the cross-transfer shuttle is adapted to carry bins to and from intermediate fixed supports between the second and first transporters and the compression or filling stations, in each of which a bin may be temporarily stored while the cross-transfer shuttle moves along the tracks without that stored bin,

- the cross-transfer shuttle being capable of transporting an empty bin and a full bin simultaneously.

4.4 Document (2) describes two embodiments of a compression system, the embodiment shown in Figures 10 to 13 being based on the first priority document DE-A-2 906 229 (corresponding document US-A-4 372 101), and the embodiment shown in Figures 1 to 9 being based on the second priority document DE-A-2 911 958.

The embodiments described in document (2) differ from that of the contested patent even in the general structure of the system. In document (2) the compression station 4 (Figure 1) or 55 (Figure 10) is not positioned on an arm parallel to those containing the filling stations 1 but is outside the carrying circuit 2,8 (Figure 1) of 51,66 (Figure 10) of the bins 6,60. For this reason, of the four positions defined by features (a) and (b) of Claim 1 in suit, the second position and the third position are amalgamated in document (2). In other words, the transverse arm normally provided with the press and hence the cross-transfer means running on this arm do not exist.

In the embodiment shown in Figure 10, the central press 55 is connected to the bin-carrying circuit by a press platform 64 which is moved into the press via rollers. But this platform cannot be compared with the cross-transfer shuttle referred to in the patent, if only for the reasons outlined above. Furthermore, the full bins 60 are emptied by a lifting device 61 and then removed. The bales of precompacted fibres 70 are carried separately by the platform 64 into the press 55. The compressed bales are then removed at the point 45 while the platform goes back to fetch a new precompacted bale. The bins themselves are not therefore carried by the

platform and do not pass through the press as they do in the embodiment of the patent. Furthermore, the platform 64 does not pass continuously through the press either; instead, it goes back and forth between the press and the carrying circuit so that dead time is inevitable.

On the parallel arms containing the filling stations 1, the full bins 60 are moved towards the press (cf. page 24, lines 14 to 17) in the direction of the top arrow on Figure 10, as stated in the aforementioned corresponding US patent: "the bin is pushed in the direction of arrows 27 onto the track 28" (cf. column 6, lines 20 to 24 and Figure 5). There is, however, no evidence that the bins which pass through the filling stations are moved by a shuttle which acts reciprocately. On the contrary, the word "pushed" implies that the bins are simply pushed (manually) on rollers on the ground in the direction of the arrow which corresponds to the general direction of travel of all the bins on the carrying circuit. The double arrows in the bottom half of Figure 10 (not described) may illustrate the reciprocating movement of a platform of the same type as the platform 64 used to carry the bales to the press but used here to take the empty bins 60, which are waiting on the circuit 66, to the filling station in consideration; as a result, the bin 60 shown in an intermediate position on the transverse arms, which the double arrow seems to indicate, actually illustrates merely a travelling bin and not one in a waiting or storage position on fixed supports as is the case in the patent. There is therefore no evidence in document (2) of the existence of a cross-transfer shuttle, as defined by the contested patent, on the transverse arms, that is to say one which is capable of

passing right through the filling station and of temporarily storing a bin in a waiting position without that bin disrupting the movement of the shuttle through the station.

The embodiment shown in Figure 1 is a structure substantially identical to that in Figure 10, except that the parallel arms containing the filling stations have open ends to indicate that the number of stations is not limited or that other bins may be held in reserve at these ends. Figure 2 shows a carriage on wheels to carry the bins 13 under the filling stations, and Figure 3 shows a carrying system more specifically designed for the central press 4 and combining a carriage 16 and a suspended take-up and conveying device 21 (cf. page 17, lines 17 to 29). Alternatively, an empty bin may be removed from and a full bin inserted under the central press 4 simultaneously (cf. page 13, lines 21 to 27). But, unlike the embodiment of the patent, where a single cross-transfer shuttle is sufficient because it passes continuously through the press, in document (2) that option requires a second separate carrying device ("von einer weiteren Greifervorrichtung übernommen") to store the empty bin at another suitable point ("an einer anderen geeigneter Stelle abgesetzt"), as the first carrying device (the take-up and conveying device 21 or platform 64) has to return empty to its point of departure in order to load another full bin. The simultaneous factor in this case does not therefore relate to the carrying of two bins by a single cross-transfer shuttle as is the case in the patent.

- 4.5 As none of the cited documents discloses all the features of the Claim 1 in suit, its subject-matter is novel within the meaning of Article 54(1) EPC.



5. *Inventive step*

5.1 With respect to the closest prior art embodiment shown in document (1), the distinguishing features of Claim 1 as referred to under point 4.3 above represent the solution to the specific problem stated in the patent, which is to reduce both the size of the system and operating times while simultaneously increasing its handling capacity (cf. patent, column 1, lines 54 to 58 and column 2, lines 14 to 18 and 51 to 63).

The option of temporarily storing bins in a waiting position on the shuttle path without disrupting the shuttles' reciprocating motion (an important factor, given that the shuttle is able to carry a plurality of bins simultaneously) also makes it possible to manage the operating sequences more precisely, and in particular to synchronise the movements of the shuttles and the transporters in an optimum manner with much greater flexibility than that offered by the known systems.

5.2 A skilled person, starting from the system known from document (1) and looking for a solution to the problem referred to above, will not find in document (1) or (2) any suggestion to modify the design of the shuttles passing through the stations or to provide intermediate fixed positions on their path for the purpose of temporarily storing the bins there, if necessary. As demonstrated in point 4.2, the disclosure in document (1) is distinctly inadequate with respect to the features of the claimed solution. As to document (2), it does not disclose a cross-transfer shuttle passing through all the stations so that the problem defined above is not addressed in and also cannot be solved by this document.

5.3 As the Appellant correctly remarked and as stated in document (2) (cf. page 7, lines 1 to 8), the carrying devices may be of various known embodiments, i.e. on the ground or suspended on rails, and areas for intermediate storage ("Zwischenlagerung") may be provided for the bins. These excessively general concepts cannot, however, be deemed to encourage the skilled person to modify the system known from document (1) in the particular manner claimed in the patent whereby each station is passed through by a (single) cross-transfer shuttle capable of simultaneously carrying two bins and of storing them either on a transporter or in a station or on an intermediate fixed support, as required. The distinguishing features referred to in point 4.3 are therefore neither disclosed nor suggested by document (2), still less used in the combination and manner as claimed in Claim 1 in suit.

5.4 For all these reasons, having regard to the state of the art, the subject-matter of Claim 1 is not obvious and therefore involves an inventive step within the meaning of Article 56 EPC. As a consequence, the dependent claims can also stand.

**Order**

**For these reasons it is decided that:**

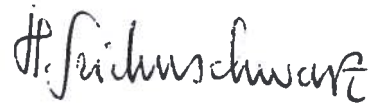
1. The decision under appeal is set aside.
2. The patent is maintained on the basis of the documents filed during oral proceedings (see point VII above).

The Registrar:



S. Fabiani

The Chairman:



H. Seidenschwarz