

**Internal distribution code:**

- (A) [ ] Publication in OJ  
(B) [ ] To Chairmen and Members  
(C) [ ] To Chairmen  
(D) [X] No distribution

**Datasheet for the decision  
of 27 March 2012**

**Case Number:** T 1966/08 - 3.3.07

**Application Number:** 99963678.0

**Publication Number:** 1157134

**IPC:** C14C 15/00

**Language of the proceedings:** EN

**Title of invention:**  
Leather tanning drum

**Patent Proprietor:**  
Italprogetti Engineering S.R.L.

**Opponent:**  
Hüni AG Process Controls

**Headword:**

-

**Relevant legal provisions:**  
EPC Art. 100(a), 56

**Keyword:**  
"Inventive step - all requests (no)"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 1966/08 - 3.3.07

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.07  
of 27 March 2012

**Appellant:** Hüni AG Process Controls  
(Opponent) Bahnhofstraße 29  
CH-8810 Horgen-Zurich (CH)

**Representative:** Celestino, Marco  
ABM Agenzia Brevetti & Marchi  
Viale Giovanni Pisano, 31  
I-56123 Pisa (IT)

**Respondent:** Italprogetti Engineering S.R.L.  
(Patent Proprietor) Via Lungarno Pacinotti, 59/A  
San Romano  
I-56020 Montopoli V.A. (IT)

**Representative:** Gritschneider, Martin  
Abitz & Partner  
Patentanwälte  
Postfach 86 01 09  
D-81628 München (DE)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 30 July 2008  
rejecting the opposition filed against European  
patent No. 1157134 pursuant to Article 101(2)  
EPC.

**Composition of the Board:**

**Chairman:** J. Riolo  
**Members:** D. Semino  
M-B. Tardo-Dino

## Summary of Facts and Submissions

I. The appeal of the opponent lies against the decision of the opposition division announced at the oral proceedings on 26 June 2008 to reject the opposition against European Patent 1 157 134. The granted patent comprised 15 claims, independent claim 1 reading as follows:

"1. Leather tanning drum (10) comprising a cylindrical main body (11) having an internal surface and circular surfaces (20, 21) and being rotatable on a horizontal axis about a hollow shaft (15), wherein the cylindrical main body (11) is provided with a plurality of cavities or pockets (31) longitudinally arranged along the internal surface of said main body, said longitudinal cavities (31) being connected with peripheral cavities (39) located peripherically to one of said circular surfaces (20, 21) and being further connected through lateral, radial cavities (33) with the hollow shaft (15) communicating with the outside, said cylindrical main body (11) being made of polymeric material, characterised in that a metal framework (19) embraces said main body (11)."

II. A notice of opposition had been filed against the granted patent requesting revocation of the patent on the grounds of extension of the subject-matter beyond the content of the application as filed, lack of novelty and lack of inventive step in accordance with Article 100(a) and (c) EPC.

III. The decision was based *inter alia* on the following documents:

- A1: *Leather*, The International Journal, November 1997, page 97;
- A2: *Technologie Conciaire*, January 1998, pages 38, 39 and 42;
- A3: *Leather*, The International Journal, March 1999, Supplement, page 4;
- D1: GB-A-949 961
- D2: US-A-4 122 692
- D3: US-A-4 441 342
- D4: Contract of sale of a tanning drum by the patent proprietor to Conceria Magica S.A.S dated 20 November 1996.

IV. The decision under appeal can be summarised as follows:

- (a) The deletion in claim 1 as granted of the feature concerning the presence of a sliding door closed by elastic means, which was present in claim 1 as originally filed, did not result in an extension beyond the content of the application as filed.
- (b) The subject-matter of granted claim 1 was not anticipated by the public display of tanning drums at the exhibitions "Tanning Tech '97" and "Tanning Tech '98" as documented by documents A1, A2 and A3, since the opponent has not provided sufficient evidence that the internal features of the tanning drums on display were inspectionable and that the exterior structure was indeed a metal framework embracing the main body of the drum.

(c) The contract of sale of a tanning drum by the patent proprietor to Conceria Magica S.A.S (D4) included a secrecy clause, so that the object of that sale did not form part of the state of the art.

(d) The subject-matter of granted claim 1 was inventive with respect to the disclosure of D2 or D3, taken as the closest prior art, because it was not known from D1, from the prior uses documented by A1, A2 and A3 or from the common general knowledge to provide the cylindrical main body with a metal framework embracing it.

V. The opponent (appellant) appealed that decision. Attached to the statement of grounds the appellant filed a sworn declaration by Mr Antonio Billeri (A4), in which he declared what he saw at the exhibitions "Tanning Tech '97" and "Tanning Tech '98" and confirmed *inter alia* that the drum seen at "Tanning Tech '98" was exactly that shown in the picture of A3.

VI. With the reply to the statement of grounds the patent proprietor (respondent) provided counterarguments to the ones of the appellant. In that reply the respondent expressed the view that it was hardly credible that Mr Billeri could remember all the details of the exhibitions more than ten years later, that he was not a neutral witness and that the tanning drums could not be inspected by public visitors at the exhibitions. The respondent did not contest that the apparatus on display was the claimed one, nor that the picture in A3 was taken at "Tanning Tech '98", but added that it was taken on request of the magazine "Leather" and not by a

third party and that the two persons visible in the picture were not public visitors, because only the personnel of the patent owner was permitted to inspect the interior of the drum.

VII. In a communication sent in preparation to oral proceedings, the Board addressed *inter alia* the issue of inventive step and pointed out that the question was to be answered which of the various problems listed in the patent under the aim of the invention had indeed been solved with respect to the closest prior art.

VIII. With letter of 7 February 2012 the respondent filed three sets of claims as auxiliary requests 1 to 3.

Claim 1 according to auxiliary request 1 included with respect to claim 1 as granted the additional feature "the metal framework (19) being externally connected with the cylindrical main body (11) and being designed such as to allow thermal dilatations of the main body (11)".

Claim 1 according to auxiliary request 2 included with respect to claim 1 as granted the additional feature "the metal framework (19) being externally connected with the cylindrical main body (11) and that the connection between said framework (19) and said cylindrical main body (11) is designed so as to leave some free space (61) between the framework itself and the cylindrical main body in correspondence with the peripheral areas of said circular surfaces (20, 21), said free space being such to allow thermal dilatations of the polymeric material main body (11)".

Claim 1 of auxiliary request 3 corresponded to claim 1 of auxiliary request 2 with the further addition within the list of features of the cylindrical main body of the feature "and with a closing door (42) for the introduction and removal of leathers in and from said drum".

- IX. With letter of 27 February 2012 the appellant filed a further declaration of Mr Billeri, adding further details of what he could see at the exhibitions.
- X. Oral proceedings were held on 27 March 2012. During the oral proceedings the discussion was focused on lack of inventive step. While analysing the problem solved with respect to D2, taken as closest prior art, the question was asked to the parties whether a reinforcing function of the metal framework embracing the main body of the drum could be derived from the disclosure of the granted patent or from the features of granted claim 1.
- XI. The arguments of the appellant (opponent), which are relevant to the present decision, can be summarised as follows:

*Inventive step - main request*

Document D2, taken as the closest prior art, differed from the subject-matter of claim 1 of the main request only in that it did not include a metal framework, since the cavity system, which was well-known, extended in the longitudinal, peripheral and radial direction. No function of the metal framework was apparent from the patent, so that the problem was that of providing a further tanning drum. The picture of A3 showed that it

was known to add an embracing framework to the conventional tanning drums. Even if the problem was considered that of reinforcing the known tanning drums, it was known to do that by means of an embracing framework from the disclosure at the exhibitions, as shown by the picture of A3. The choice to make the framework of metal was in any case an arbitrary one. For those reasons, the tanning drum of claim 1 of the main request was not inventive.

*Inventive step - auxiliary requests*

The additional features of claim 1 according to the auxiliary requests did not contribute to the presence of an inventive step either. The adoption of appropriate measures to take account of thermal dilatations, such as the provision of some free space, was for a person skilled in any mechanical field an obvious constraint of an apparatus made of different materials. The provision of that free space in the peripheral area of the circular surfaces of the main body was an arbitrary choice. The addition of a closing door was also a usual feature of a tanning drum. For those reasons, the subject-matter of claim 1 according to the auxiliary requests was also not inventive.

- XII. The arguments of the respondent (patent proprietor), which are relevant to the present decision, can be summarised as follows:

*Inventive step - main request*

The tanning drum of claim 1 of the main request differed from those disclosed in D2 in that it included



peripheral cavities connected to the longitudinal cavities and a metal framework. The peripheral cavities improved the internal circulation within the drum and were not suggested by any of the prior art documents. The metal framework had a reinforcing function for the main body of the drum as evident from the wording of the claim itself and supported by paragraphs [0017], [0025], [0027] and [0059] of the patent, which additionally mentioned the advantages in terms of safety during use. The problem solved by the provision of a metal framework was therefore that of enhancing the global safety level associated with the operating phases of tanning drums made of polymeric material. There was very little knowledge at the time of filing of the patent of how to make big tanning drums in polymeric material and no hint in the available prior art to provide them with metal frameworks. The presence of a metal framework was not identifiable in the drums shown at the exhibition, as confirmed by the picture of A3, from which it was not clear that a framework was present and that it embraced the main body. The interpretation of the picture of A3 given by the appellant could only be possible in view of the knowledge in the patent and was therefore the result of an *ex-post facto* analysis. Moreover, there was no possibility to recognise that the framework was made of metal, since it was covered with plastics. For those reasons, the tanning drum of claim 1 was inventive with respect to the disclosure of D2 combined with the drums shown at the exhibitions, as seen in the picture of A3.

*Inventive step - auxiliary requests*

The provision of additional measures to allow thermal dilatations was contrary to the expectations of the person skilled in the art, who would not allow any movement to a plastic barrel surrounded by a metal framework. In particular, the skilled person could not expect that the best position to leave some free space between the main body and the metal framework would be in correspondence with the peripheral areas of the circular surfaces of the main body and that no other free space would be then necessary. For those reasons, at least the subject-matter of claim 1 according to the auxiliary requests should be acknowledged as inventive.

- XIII. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.
- XIV. The respondent (patent proprietor) requested that the appeal be dismissed, or, alternatively, that the patent be maintained on the basis of the set of claims of one of auxiliary requests 1 to 3 as submitted with the letter of 7 February 2012.

**Reasons for the Decision**

1. The appeal is admissible.

*Main request*

2. *Inventive step*

2.1 *Closest prior art*

2.1.1 According to the patent, the aim of the invention is to provide a drum with all the constructive and structural improvements which enable the user to get over the problems of the known drums (paragraph [0020]).

Document D2, which concerns tanning drums (title, claim 1), aims at solving the constructive problems of known drums (column 1, line 56 - column 2, line 3) and discloses a tanning drum with all the features of the preamble of claim 1 of the main request (see points 2.1.2 - 2.1.5, below), is for these reasons to be considered as the closest prior art.

2.1.2 Document D2 discloses a tanning drum (claim 1 and figures 1 - 7 as described in column 10, line 49 - column 12, line 24) comprising a cylindrical main body having an internal surface and circular surfaces (point (a) in claim 1 and elements 10, 14 and 15 in the figures) and being rotatable on a horizontal axis about a hollow shaft communicating with the outside (point (b) in claim 1 and element 18 in the figures).

2.1.3 The cylindrical main body is provided with a plurality of longitudinal cavities arranged along the internal surface of said main body (elements 29, 30 and 31 in the figures as described in column 11, lines 25 - 30) and a plurality of radial cavities connected to the longitudinal cavities and to the hollow shaft (elements 51 - 53 in the figures as described in column 12, lines 20 - 24).

2.1.4 If the total cavities resulting from the longitudinal and radial cavities are taken into account together

with the flux of the fluids flowing through these cavities (e.g. by observing their shape and the arrows indicating the flux in figure 1), it is evident that the cavities extend in the longitudinal direction, in the peripheral direction (in particular at the point of connection between the cavities 29 - 31 and the cavities 51 - 53 and in correspondence of the circular surfaces, see figure 7) and finally in the radial direction. The device of D2 comprises therefore also a plurality of peripheral cavities located peripherically to one of said circular surfaces and connected both to the longitudinal cavities and to the radial cavities.

2.1.5 The cylindrical main body may be made of polymeric material (column 6, lines 51 - 52, see in particular the reference to plastics material).

2.1.6 Therefore, the tanning drum of granted claim 1 differs from the drum disclosed in D2 only in that it has a metal framework (19) embracing the main body.

## 2.2 *Problem solved*

2.2.1 The aim of the invention is, according to the patent in suit, to provide a drum with all the constructive and structural improvements which enable the user to get over the problems of the known drums (paragraph [0020]), including the expensive washing of wood drums (paragraph [0004]), the disadvantages related to the use of steel drums (paragraphs [0005] to [0007]), the difficulties related to the bath recycle (paragraphs [0008] to [00016]) and the safety issues (paragraphs [0017] to [0019]).

- 2.2.2 Most of these issues are, however, already solved by the drum of D2, which can be made of plastics and therefore does not present the disadvantages of wood and steel drums and possesses a recycle structure by means of the system of cavities which is the same as the one of the claimed drum.
- 2.2.3 The safety issue, as discussed in the patent in suit (paragraphs [0017]-[0019]) in relation to the risk of an increase in internal pressure, is unrelated to the drum of granted claim 1, since it is solved by means of suitable automatic devices (paragraph [0018]) and innovative safety devices in the closing means of the charging openings (paragraph [0019]), which do not appear among the features of the claimed drum.
- 2.2.4 No other passage in the patent provides any information as to the function or possible effects and advantages related to the addition of an embracing metal framework to a known drum, such as the one of D2. In particular, no information is present of a possible reinforcing function, contrary to the submissions of the respondent.
- 2.2.5 Paragraph [0025], which simply repeats the wording of the claim and adds (as according to claim 1 of auxiliary request 1) that the framework may be designed to allow thermal dilatation, paragraph [0027], which mentions generically other possible constructive improvements, and paragraph [0059], which refers to the possibility of further variations of the external metal framework, do not give any indication of a possible function of the embracing metal framework, let alone a reinforcing one.

2.2.6 A reinforcing function is also not derivable from the wording of claim 1, nor is it inevitably and clearly achieved by means of the generic feature that a metal framework embraces the main body of the drum.

2.2.7 Moreover, no effect or advantage may be ascribed to the choice of metal as the material of the embracing framework.

2.2.8 Under such circumstances, the problem solved by the claimed drum is that of providing a further tanning drum starting from the one of D2.

### 2.3 *Obviousness*

2.3.1 Document A3 shows in the picture in the upper half of page 4 a polypropylene drum which was on display at "Tanning Tech '98". This was not disputed by the parties.

2.3.2 Without entering into the merit of whether the interior of the drum was inspectionable at the fair or whether the material of the elements external to the main body of the drum was identifiable, on which the parties supported opposite views, the Board sees it as an undisputable fact that the skilled person simply seeing the drum from a distance (as shown in the picture of A3) could identify a number of longitudinal bars connected to radial bars and constituting a framework embracing the main body of the drum.

2.3.3 The provision of an embracing framework to a tanning drum as the one of D2 is therefore obvious for the skilled person looking for further tanning drum in view

of the public display at "Tanning Tech '98" of a polypropylene tanning drum comprising an embracing framework.

2.3.4 The mere choice of a metal as the material of the embracing framework is an arbitrary choice which can also not justify the presence of an inventive step.

2.4 For these reasons, it is concluded that the tanning drum of granted claim 1 does not involve an inventive step.

*Auxiliary request 1*

3. *Inventive step*

3.1 Claim 1 according to auxiliary request 1 includes with respect to claim 1 as granted the additional feature "the metal framework (19) being externally connected with the cylindrical main body (11) and being designed such as to allow thermal dilatations of the main body (11)".

3.2 Due to the absence of an embracing metal framework in the tanning drum of document D2, the added feature constitutes a further distinguishing features with respect to the drum of the closest prior art.

3.3 While the provision of an external connection between the framework and the main body does not appear to solve any additional problem, the design of the framework such as to allow thermal dilatations of the main body is clearly meant to avoid the presence of mechanical tensions in case of changes in temperature

- during the operation of a device made of different materials, as apparent to any skilled person in the field of design of (any kind of) mechanical devices.
- 3.4 Starting from the tanning drum of D2, the problem solved by the device of claim 1 of auxiliary request 1 is that of providing a further tanning drum which avoids mechanical tensions in case of temperature variations.
- 3.5 While the addition of a metal framework connected to the main body of the drum is in itself obvious for the same reasons as detailed for claim 1 of the main request (point 2.3, above), the design of the device so as to allow thermal dilatations of the parts made of different materials is a straightforward measure to be adopted for avoiding mechanical tensions in case of temperature changes for a person skilled in the field of mechanical devices. As the purpose of the added feature is straightforward to the skilled person without the need of any indication in this sense in the patent, so is the adoption of the corresponding measure as a solution to the posed problem.
- 3.6 The submission of the respondent that this straightforward measure would be contrary to the expectations of the person skilled in the art, who would not allow any movement to a plastic barrel surrounded by a metal framework, has no bearing, since it was not supported by evidence.
- 3.7 For these reasons, also the tanning drum of claim 1 according to auxiliary request 1 does not involve an inventive step.



*Auxiliary request 2*

4. *Inventive step*

4.1 Claim 1 according to auxiliary request 2 includes with respect to claim 1 as granted the additional feature "the metal framework (19) being externally connected with the cylindrical main body (11) and that the connection between said framework (19) and said cylindrical main body (11) is designed so as to leave some free space (61) between the framework itself and the cylindrical main body in correspondence with the peripheral areas of said circular surfaces (20, 21), said free space being such to allow thermal dilatations of the polymeric material main body (11)".

4.2 The additional feature of auxiliary request 2 follows therefore the same line as the feature added to auxiliary request 1 with the further specification of the measure by means of which thermal dilatations are allowed, namely a free space in a specific position.

4.3 Contrary to the allegations of the respondent, there is no proof in the patent or in any of the pieces of evidence on file that the positioning of a free space between the framework and the main body in the specific position given (in correspondence with the peripheral areas of the circular surfaces) is the best choice, offers any advantage or solves any further technical problem.

4.4 The problem solved by the device of claim 1 of auxiliary request 2, starting from the tanning drum of

D2, is therefore the same as for claim 1 of auxiliary request 1, namely that of providing a further tanning drum which avoids mechanical tensions in case of temperature variations.

4.5 The addition of a metal embracing framework and the provision of specific measures to allow thermal dilatations of the main body are not inventive for the same reasons as given for auxiliary request 1 (point 3.5, above), with the additional consideration that the provision of some free space is the most straightforward measure to allow thermal dilatations and the arbitrary choice of its position cannot offer any contribution to the inventiveness of the claim.

4.6 For these reasons, the tanning drum of claim 1 according to auxiliary request 2 does not involve an inventive step.

### *Auxiliary request 3*

#### 5. *Inventive step*

5.1 Claim 1 of auxiliary request 3 corresponds to claim 1 of auxiliary request 2 with the further addition within the list of features of the cylindrical main body of the feature "and with a closing door (42) for the introduction and removal of leathers in and from said drum".

5.2 The respondent did not claim that such a feature could contribute to the presence of an inventive step and introduced it for other reasons (to deal with other grounds of opposition which are not dealt with in the

present decision). Moreover, such a feature is already present in the tanning drum disclosed in document D2, where it is specified that the tanning compartment is accessible for loading and unloading via charging openings in the entire drum (column 10, lines 63 - 65), which are sealable by means of covers (column 10, lines 66 - 67).

- 5.3 In view of this, the differences between the drum of claim 1 of auxiliary request 3 and the device of document D2 are the same as for the drum of claim 1 of auxiliary request 2.
- 5.4 Following the same reasoning as developed for claim 1 of auxiliary request 2 (point 4, above), the tanning drum of claim 1 according to auxiliary request 3 does not involve an inventive step.
6. Since claim 1 according to all the requests on file does not involve an inventive step, there is no need for the Board to decide on any other of the objections of the appellant.

**Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar

The Chairman

S. Fabiani

J. Riolo