

OPINION UNDER SECTION 74A

Patent	GB 2593166 B
Proprietor(s)	Ferzoli International Industries Ltd
Exclusive Licensee	
Requester	Agile IP LLP
Observer(s)	Dollemores
Date Opinion issued	06 February 2025

The request

1. The comptroller has been requested to issue an opinion in relation to the validity of patent GB 2593166 B (the patent). The request asks whether the invention for which the patent has been granted is not new, does not involve an inventive step and/or lacks sufficiency. The requester cites the following documents in their request:

- Document D1 - CA 3099333 A1,
published 12 December 2019
- Document D2 - ScienceDirect Article: "Effect of water glass on early
hardening of Portland cement",
published 2017
- Document D3 - Marmox UK Ltd social media "xeet" post,
published 30 January 2020
- Document D4 - Marmox UK Ltd tilebacker™ brochure,
published November 2019
- Document D5 - WR Leivers Roofing article: "What You Need To Know
About Slate Roofs",
published 25 March 2019
- Document D6 - Marmox UK Ltd website screenshot,
Published 2 March 2016
- Document D7 - CuarteX™ installation guide,
published 6 May 2015

Document D8	-	CuarteX™ product article, published 28 May 2015
Document D9	-	JACKOBOARD® article, published March 2019
Document D10	-	Slate Lite™ Catalogue, published 2018/2019
Document D11	-	US 9322184 B2 published 26 April 2016
Document D12	-	Marmox UK Ltd installation guide, published 2017
Document D13	-	Product Data Sheet for Sikafloor® CureHard - 24, published March 2020

Observations

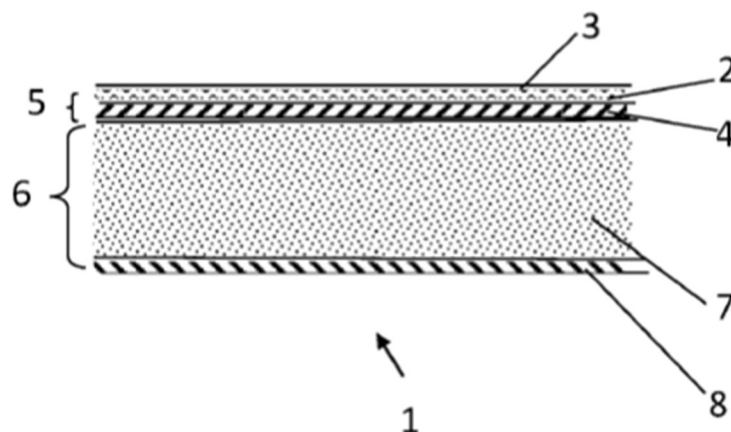
2. Observations were received on 18 December 2024 and observations in reply were received on 2 January 2025.

The patent

3. The patent is entitled “a decorative panel or tray” and was filed on 16 March 2020. The patent was granted on 8 May 2024 and remains in force in the UK.
4. The patent relates to a decorative panel or tray comprising a stone veneer surface.
5. Very thin natural stone veneers have been produced by placing a fibrous/resin layer on a block of stone and then, when the resin has set, removing a very thin layer of stone from the block of stone to form a laminated sheet comprising a stone veneer on the resin/fibre substrate. The stone veneer may typically be about 0.5mm thick with a total thickness of the laminated sheet comprising the stone veneer and the fibre/resin layer being typically about 2mm thick, which is relatively flexible and may even be transported as a rolled-up sheet.
6. However, to apply the stone laminated sheet to a wall is a very skilled process, firstly requiring the wall to be prepared to provide a very level, even surface, and then applying the stone laminated sheet to a layer of adhesive applied to the wall. It is very difficult to reposition the stone laminated sheets or precisely abut adjacent sheets on the adhesive, due to the very thin nature of the sheets.
7. The patent aims to provide a decorative panel with a thin stone laminated sheet bonded to a relatively rigid backing board, thus enabling the decorative panel to be more easily cut or sawn and positioned in place in a similar manner to which a sheet of plasterboard or another covering panel may be applied to studwork or to an existing wall.

8. The granted patent includes a single independent claim, which reads:
1. (a) A decorative panel or tray, comprising:
 - (b) a layer of stone of between 0.2mm and 1mm thick;
 - (c) a substrate bonded to the layer of stone to form a laminated sheet having a thickness of between 1mm and 3mm; and
 - (d) a backing board bonded to the laminated sheet, the backing board having a thickness greater than 5mm, wherein:
 - (e) the backing board comprises a relatively thick central layer and
 - (f) a first relatively thin outer layer, which first relatively thin outer layer is a stiffening layer forming a first major face of the backing board and a first major face of the decorative panel or tray and wherein
 - (g) the laminate sheet forms a second major face of the decorative panel or tray opposite to the first major face.

9. This arrangement is illustrated in figure 4 of the patent, which is reproduced below. This cross section through the decorative panel 1 shows a stone veneer layer 2 of approximately 0.5mm thickness on a front surface 3 of the decorative panel 1, the stone veneer layer 2 being bonded to a fibre and resin substrate layer 4, which is about 1.5mm thick. These two layers together form a laminated layer 5 which is approximately 2mm thick. The laminated layer 5 is bonded to a backing board 6, which is approximately 8 mm thick. The backing board 6 comprises a central layer 7, which is approximately 6mm thick and may be formed from expanded polystyrene foam, and an outer layer 8 approximately 1mm thick and may comprise a mesh reinforced cement.



Claim construction

10. Before I can determine an opinion as to the validity of the patent, I must first construe the claims. This means interpreting the claims in light of the description and drawings as instructed by section 125(1) of the Patents Act:

For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

11. I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately, the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the decisions of the High Court in *Mylan v Yeda*¹ and the Court of Appeal in *Actavis v ICOS*².
12. The requester has submitted that the notional person skilled in the art would be a manufacturer and designer of decorative panels and trays for interior and exterior settings. I accept that this definition of the skilled person is reasonable. The requester also suggests that their common general knowledge would include commonly available stone veneers, such as those described in documents D8 and D10, commonly available tile backing boards, such as those shown in documents D1, D3, D4 and D9, commonly used materials for the construction of decorative panels, common properties of these materials, such as described in document D5, common treatments of these materials, such as described in document D2, manufacturing and design techniques for panels, such as those described in document D11, installation methods and techniques, such as shown in document D12. I'm not convinced that the common general knowledge of the skilled person would include all of these cited documents, but I'm happy to accept the more general statements about their common general knowledge and I don't feel that it is necessary to address the relevance of each of these documents beyond any discussion in the remainder of the opinion below.
13. The requester has proposed that nothing in the patent suggests that the terms "*laminated*" and "*substrate*" be given meaning other than their standard dictionary definitions. The standard dictionary definition of "*laminated*" is "manufactured by bonding layers of material together" and "*substrate*" is "an underlying substance or layer". I agree that these definitions are appropriate for these terms as used in claim 1 of the patent.
14. Additionally, although not specified in claim 1, the requester also refers to the standard dictionary definition of "*resin*" when referring to the composition of the claimed "*substrate*". In this context, I would say that the term "*resin*" refers to "a solid or liquid synthetic organic polymer used as the basis of plastics, adhesives, varnishes, or other products".
15. I believe that it is also important to consider how the term "*stone veneer*" would be understood by the skilled person (even though this term does not appear in claim 1 either). In the patent specification, the term "*stone veneer*" is used to refer to the "*layer of stone*" itself, i.e. without the "*substrate*" layer. I believe that a skilled person would understand that the term "*stone veneer*" can be used in this way depending on the context, e.g. stone cladding applied to buildings has long been used as such a "*stone veneer*" comprising of natural stone alone. However, more recently, the term "*stone*

¹ *Generics UK Ltd (t/a Mylan) v Yeda Research and Dev. Co. Ltd & Others* [2017] EWHC 2629 (Pat)
² *Actavis Group PTC EHF v ICOS Corporation & Ors* [2017] EWCA Civ 1671

veneer” has also been used to refer to a thin layer of stone adhered to a thin layer of fibreglass/polyester resin composite backing manufactured as a flexible “*stone veneer*” – the requester has provided documents D8 and D10 as examples of this use of the term “*stone veneer*”, which, to me, are reasonable examples of subject matter that would form part of the common general knowledge of the skilled person. Therefore, depending on the context, I believe that a skilled person would also understand that the term “*stone veneer*” can refer to a “*laminated sheet*” comprising of a thin “*substrate*” of suitable backing material “*bonded to*” a thin “*layer of stone*”.

Validity – sufficiency

16. Section 14(3) of the Patents Act reads:

The specification of an application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art.

17. The requester has questioned the sufficient disclosure of the invention defined in claims 3, 7 and 16.
18. Claim 3 defines that “*every component is inherently waterproof*” with proposed support for this feature at page 5 lines 10 to 12: “*the outer surface is of natural stone which will itself be inherently waterproof*”. The requester rightly points out that not all natural stone is “*inherently waterproof*”, but I believe that a skilled person would be able to select a waterproof natural stone based on their common general knowledge. There appears to be no question raised regarding the “*inherently waterproof*” nature of the other components of the “*decorative panel or tray*”. Therefore, I believe that the disclosure is sufficient for a skilled person to perform the invention defined by claim 3.
19. Claim 7 requires that “*the laminated sheet is applied directly to the central layer, which laminated sheet forms a second stiffening layer.*” The requester points out that “*the laminated sheet*” is described in the patent as being “*relatively flexible and, depending on the type or manufacturer of the laminated sheet, prior to being bonded to the backing board, may be rolled up*” (page 3 lines 11 to 15). Therefore, the requester questions how a “*relatively flexible... laminated sheet*” can form a “*stiffening layer*” for the “*central layer*” of the “*backing board*”. The observer contends that a skilled person would understand that the “*laminated sheet*”, although “*flexible*”, comprises a thin “*layer of stone*”, which would not generally be compressible. So, a skilled person would deduce that applying a non-compressible outer layer on a board having a softer inner layer would result in that outer layer acting as a “*stiffening layer*”. I agree with these observations and believe that there is sufficient disclosure for a skilled person to perform the invention defined by claim 7.
20. Claim 16 defines “*an automated process for applying a layer of adhesive to one of the laminated sheet or the backing board, mechanically bringing the two together and compressing the two together.*” The requester highlights that there is no mention of automation in the supporting passage of the description. However, I believe that a skilled person would consider it straightforward to automate the claimed process based on their common general knowledge such that claim 16 is sufficiently disclosed.

Validity – novelty and inventive step

21. Section 1(1) of the Patents Act reads:

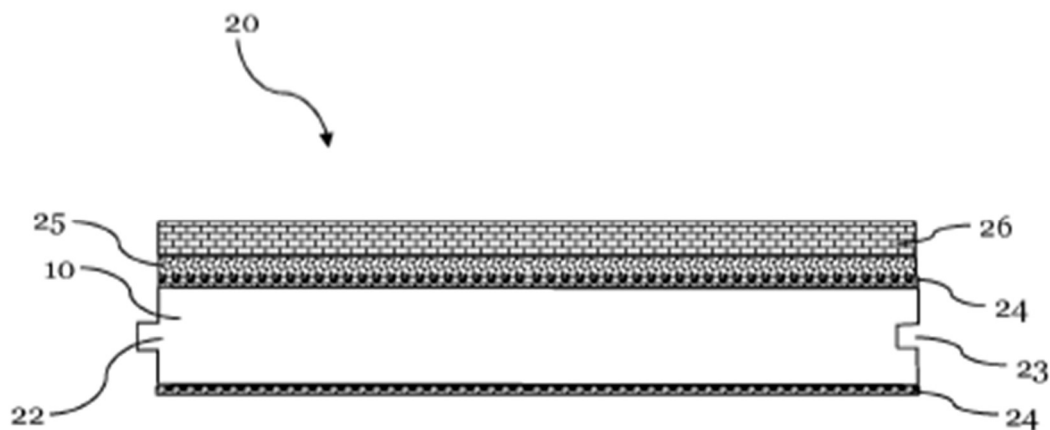
A patent may be granted only for an invention in respect of the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step...

22. The requester has argued that independent claim 1 is not novel over document D1, a Canadian patent application published before the filing date of the patent.

23. Figure 1 of document D1 is reproduced below and shows a wall, ceiling or flooring panel 20 comprising a carrier board 10 having a thickness of approximately 8mm. The front and rear surfaces of carrier board 10 are provided with a silica layer 24. On the front surface of the carrier board 10, a layer of stone veneer 26 is applied. The layer of stone veneer 26 is glued onto the carrier board 10 by means of a layer of adhesive 25.



24. The observer argues that the only reference to the panel of document D1 being “decorative”, as required by feature (a), is in reference to prior art arrangements. For example, page 1 lines 30 to 31 of D1 states:

“Common to all these [prior art] solutions is that the décor layer is an artificial décor, which is for example printed onto a paper or plastic web.”

25. However, I note that it is the “layer of stone” in feature (b) of claim 1 that gives the “panel” its “decorative” nature and a “layer of stone” is clearly disclosed in document D1.

26. Feature (b) of claim 1 requires “a layer of stone of between 0.2mm and 1mm thick” and feature (c) requires “a substrate bonded to the layer of stone to form a laminated sheet having a thickness of between 1mm and 3mm”. Describing the invention of document D1, page 3 lines 2 to 3 discloses:

“the carrier board comprises on its front surface a first layer of an adhesive, as

well as a second layer of a stone veneer, which has a thickness of 0.1 to 4 mm"

27. At this point, assuming that a skilled person would understand the term "*stone veneer*" as used in document D1 to mean a "*layer of stone*" as discussed in paragraph 15 above, I consider that document D1 does disclose a "*stone layer*" of a thickness required by feature (b) of claim 1.
28. However, the observer has argued that document D1 makes no reference to a laminated sheet, as required by feature (c), contending that the stone veneer of document D1 is bonded directly to an outer surface (silica layer 24) of the carrier board 10 by means of the adhesive layer 25. The requester contends that the substrate of feature (c) is described in the patent as a fibre and resin layer, and the term "adhesive" is encompassed within the standard dictionary definition of "resin" (see paragraph 14 above). Therefore, the requester suggests that the stone veneer 26 together with the layer of adhesive 25 forms the "*laminated sheet*" of feature (c) of claim 1 of the patent.
29. I note that claim 1 merely requires "*a substrate bonded to the layer of stone to form a laminated sheet*" with no specific details regarding the composition of the "*substrate*" beyond the "*thickness of between 1mm and 3mm*". I also note the description of the adhesive layer in document D1:
- "The layer of adhesive cushions mechanical impacts and transfers those into the carrier board. For this reason, it is preferred that the layer of adhesive is provided continuously over the carrier board."* (page 3 lines 22 to 24)
- "the adhesive is a highly elastic polyurethane adhesive."* (page 3 line 36)
- "the layer of adhesive is applied in a thickness of 50 µm to 3 mm, even more preferred of 200 µm to 2.5 mm, yet still further preferred of 300 µm to 2 mm, and most preferred of 500 µm to 2 mm."* (page 4 lines 2 to 4)
30. In fact, a large part of the description of document D1 relates to the properties and, most significantly, thickness of the adhesive layer and so I consider this layer of adhesive to constitute a "*substrate*". Furthermore, taking the lower end of the range of disclosed thicknesses of the stone veneer layer of D1 (i.e. 0.1 to 4 mm) together with the disclosed thickness of the adhesive layer of D1 provides a "*laminated sheet*" of a thickness required by feature (c) of claim 1.
31. Therefore, I believe that document D1 does disclose feature (c) of claim 1.
32. The observer has further argued that document D1 teaches away from a panel where the stone layer is first bonded to a first material to form a laminate and where the laminate is then bonded to the backing board. However, I do not see that claim 1 requires the construction of the panel in this way. But, even if it were considered that the stone veneer layer and adhesive layer of D1 together do not constitute a "*laminated sheet*" as required by feature (c) of claim 1, I believe that this feature is still disclosed in document D1. In my view, document D1 provides context for a skilled person to understand that its use of the term "*stone veneer*" could mean a "*laminated sheet*" comprising of a "*substrate*" and a "*layer of stone*" (as discussed in paragraph 15 above). For example, when discussing prior art arrangements, document D1 discloses (at page 2 lines 14 to 26):

“Veneers of natural stone consist of very thin layers, for example between 0.5 and 2 mm, of stones that are glued onto a flexible carrier material. In this way, the veneer is easy to handle and can for example be used in the form of panels as wall coverings, in particular inside of buildings. One disadvantage of the known stone veneer is, however, that the resistivity and particularly the mechanical resistivity is relatively low. These materials are therefore hardly suitable as material for floorings, for example. In light of the known panels respectively coverings, the present invention is faced with the object to provide a panel, in particular a wall, ceiling or flooring panel, which comprises preferably the advantages of the known panels, while eliminating the mentioned disadvantages of the prior art. It is in particular an object to provide an improved panel having a stone veneer, which offers a good resistivity and which is relatively easy to install.”

33. In this context, a skilled person could reasonably be expected to understand the term “stone veneer” as used in document D1 to refer to a ‘*very thin layer... of stone that is glued onto a flexible carrier material*’. To put it another way, reference to “stone veneer” as used in document D1 could refer to both the “*layer of stone*” required by feature (b) of claim 1 and the “*substrate bonded to the layer of stone to form a laminated sheet*” required by feature (c) of claim 1.
34. As already discussed in paragraph 26 above, the stone veneer layer of D1 has a thickness of 0.1 to 4 mm, which meets the requirement for the thickness of the “*laminated sheet*” defined in feature (c) of claim 1, i.e. “*between 1mm and 3mm.*” When the stone veneer layer of D1 is understood in this way, then there is no separate specific reference to the thickness of the layer of stone of the veneer. However, a skilled person could reasonably be expected to take guidance from the discussion of the prior art in document D1, which describes “*very thin layers, for example between 0.5 and 2 mm, of stones*” in such veneers. Therefore, this thickness of the layer of stone meets the requirements of feature (b) of claim 1.
35. Feature (d) of claim 1 requires “*a backing board bonded to the laminated sheet, the backing board having a thickness greater than 5mm*”. Page 2 line 35 to page 3 line 4 of document D1 discloses:
- “a carrier board with a front surface and a rear surface, whereby the carrier board is a board of mineral wool or a board of fiber cement, with a thickness of preferably 3 to 30 mm, and whereby the carrier board comprises on its front surface a first layer of an adhesive, as well as a second layer of a stone veneer, which has a thickness of 0.1 to 4 mm, and which is glued onto the carrier board by means of said adhesive.”*
36. As discussed above, if I consider the first layer of adhesive together with the second layer of stone veneer to be a “*laminated sheet*” as defined in claim 1 of the patent, then I also consider that the carrier board of document D1 meets the definition of the “*backing board*” of claim 1 of the patent (inasmuch as the carrier board may exceed “*5mm*” in thickness), which is “*bonded to the laminated sheet*”.
37. Alternatively, if I consider the “*stone veneer*” as used in document D1 to refer to both the “*layer of stone*” and the “*substrate bonded to the layer of stone to form a laminated sheet*”, then the carrier board of document D1 is “*bonded to*” this “*laminated sheet*” of

stone veneer by the layer of adhesive. In this case, the thickness of the adhesive layer is not relevant (although, for completeness, I note that document D1 does allow for very thin layers of adhesive in comparison to the stone veneer layer or even strings or spots of adhesive, rather than a continuous layer (see, for example, page 3 lines 24 to 29).

38. Either way, I believe that feature (d) is disclosed in document D1.
39. There appears to be no argument presented by the observer to suggest that the remaining features of claim 1 are not disclosed in document D1. In particular, as illustrated in figure 1 of document D1, the central part of the carrier board 10 is "*relatively thick*" (see also, for example, page 7 lines 5 to 6 of D1) and the lower silica layer 24 does provide a "*first relatively thin outer layer... forming a first major face of the backing board and a first major face of the decorative panel or tray*".
40. Feature (f) requires that the "*relatively thin outer layer is a stiffening layer*". The silica layer 24 in document D1 is not explicitly described as providing a stiffening property to the carrier board, but this would appear to be an inevitable result (the requester has provided document D2 to support the conclusion that water glass treatment of the carrier board would provide a "*stiffening layer*" – although I'm not convinced that the contents of this document could be considered a part of the common general knowledge of the skilled person, I don't believe this is necessary to conclude that the silica layer 24 in document D1 would stiffen the carrier board 10).
41. Therefore, in my opinion, claim 1 is not new in the light of document D1.
42. Claim 6 requires "*a second relatively thin outer.. stiffening layer*" forms "*a second major face of the backing board*". As illustrated in figure 1 of document D1, the upper silica layer 24 meets this requirement such that claim 6 is not new.
43. Claim 2 requires that "*the substrate comprises a layer of fibres and resin*" whilst claim 4 requires that "*the laminated sheet is relatively flexible, prior to being bonded to the backing board, and wherein the backing board is relatively rigid.*" I discussed in paragraph 15 above how a skilled person would understand the term "*stone veneer*". I believe that, as part of their common general knowledge, the skilled person would be familiar with a flexible "*stone veneer*" comprising a thin layer of stone adhered to a thin layer of fibreglass/polyester resin (documents D8 and D10 are examples of such "*stone veneer*"). This common general knowledge of the skilled person is acknowledged at page 1 lines 6 to 9 of the patent:

"Recently it has been possible to produce very thin natural stone veneers by placing or creating a fibrous/resin layer on a block of stone and then, when the resin has set, removing a very thin layer of stone from the block of stone to a form laminated sheet".

44. Hence, I believe that claims 2 and 4 would be obvious to the skilled person in the light of document D1.
45. As discussed in paragraph 18 above, the sufficiency of disclosure to enable the invention of claim 3 to be performed is based on a skilled person selecting an "*inherently waterproof*" natural stone as part of their common general knowledge. To

me, it follows that selecting an “*inherently waterproof*” natural stone to produce the panel disclosed in document D1 would also be obvious to a skilled person. However, the claim does require that “*every component is inherently waterproof*” – in document D1, the carrier board is a board of mineral wool or a board of fibre cement (page 2 lines 35 to 36). The requester has proposed that a skilled person would consider it obvious to substitute the carrier board of D1 for a carrier board of a different material, such as XPS foam (documents D3 and D6 are provided as examples of this type of tile backer board). On the one hand, I do not feel that there is anything within document D1 that would motivate a skilled person to make this substitution of carrier board material but, on the other hand, I do not believe that a skilled person would need to make such a substitution to render claim 3 obvious. Mineral wool is reportedly a water-resistant material, rather than waterproof. However, fibre cement boards are generally reported to be highly resistant to moisture and seem to have similar waterproofing properties to the expanded polystyrene foam “*backing board*” of the patent (see page 6 lines 30 to 31). As such I believe that claim 3 lacks an inventive step over document D1.

46. Claim 5 requires that “*the central layer of the backing board comprises a layer of polystyrene*” whilst claim 8 requires that “*the or each stiffening layer is a cement layer*” and claim 9 requires that “*the or each cement layer comprises a reinforcement mesh*”. As discussed above, the carrier board in document D1 is a board of mineral wool or a board of fibre cement (page 2 lines 35 to 36). Document D1 discusses reasons and benefits of using these materials together with the surface treatment of sodium silicate, so I see no reason why a skilled person would be motivated to substitute these specific materials for a board of polystyrene and outer layer of reinforced mesh cement. Hence, I believe that claims 5, 8 and 9 are novel and inventive over document D1.
47. The requester’s arguments in relation to claim 7 were limited to sufficiency, as discussed in paragraph 19 above. I believe that claim 7, requiring the “*the laminated sheet is applied directly to the central layer*” of the “*backing board*”, is novel and inventive over document D1.
48. Claims 10 to 14 define various thicknesses, lengths and widths of the “*decorative panel*”. The thickness of the panel disclosed in document D1 (i.e. “*carrier board... with a thickness of preferably 3 to 30 mm... layer of a stone veneer, which has a thickness of 0.1 to 4 mm*”) falls within the range of thicknesses defined in claims 10 to 12. So, I believe that these claims are not novel. The dimensions defined in claims 13 and 14 seem to be standard dimensions for construction boards that would be familiar to the skilled person. So, I believe that these claims lack inventive step.
49. I do not believe that a skilled person would consider it obvious to use the panel disclosed in document D1 as a “*shower tray or sink tray*” as defined in claim 15. Whilst I have concluded, in paragraph 45 above, that the skilled person would consider it obvious that “*every component*” of the panel disclosed in document D1 “*is inherently waterproof*”, its use as a “*shower tray or sink tray*” would appear to require further modification. For example, page 5 lines 16 to 21 of the patent explains:

“In the case of a decorative tray in accordance with the present invention, this may provide a shower tray or sink tray constructed in the same manner but here the backing board may be significantly thicker than in the case of a decorative panel, for example the backing board could be between 20mm and 100mm thick

and could be premoulded with a depression where it is desired that the shower tray or sink tray has such a preformed depression.”

50. I do not believe that there is anything in document D1 that would suggest to a skilled person that such a modification of its disclosed panel would be obvious. Therefore, I believe claim 15 is new and inventive over document D1.
51. I believe that both the “*automated process*” of constructing the “*decorative panel*” defined in claim 16 and the “*method of panelling at least a portion of a room*” as defined in claim 17 would be obvious to a skilled person as part of their common general knowledge.

Opinion

52. I am of the opinion that the patent specification does disclose the invention in a manner which is sufficiently clear and complete for the invention to be performed by a person skilled in the art.
53. I consider that independent claim 1 is invalid as the invention defined by it is not novel in the light of document D1.
54. I am also of the opinion that dependent claims 2 to 4, 6, 10 to 14, 16 and 17 are invalid as the invention defined by them is either not new or lacks an inventive step over document D1.

Application for review

55. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

Dan Hickery
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.