

Singapore Patent Application No. 9501818-0
Arguments to the Written Opinion

Please find enclosed the following following **3 proposals**:-

- i) proposal for an amended claim 1 (according to the European Patent Office Examiner) and an additional claim 21 (as **Main request**);
- ii) proposal for a further amended claim 1 and an additional new claim 21 (as **Auxiliary request 1**);
- iii) proposal for another further amended claim 1 and an additional new claim 21 (as **Auxiliary request 2**);

(1.) With reference to the office action of the European Patent Office dated 16 August 1996, the EPO Examiner does not consider the swimming pool cover of US-A 4628549 as closest prior art but the object of the Norwegian patent 107177 (point 1.1 of the communication). Document US-A 4628549 does not belong to a neighbouring technical field or to a broader general technical field, it does not address the objective problem of the invention or even suggest addressing this problem since the studded web disclosed is not intended and is even unsuitable for use for building purposes (point 1.2 and 2.1 of the communication).

However, the applicant does not agree with most of the considerations of the examiner regarding to the inventive step and to possible combinations of the different documents.

The new claim 1 proposed by the examiner (point 2.3 of the communication) is basically a combination of the present claim 1 and present claim 17.

(2) With reference to the 2 auxiliary requests, both amendments are directed to the fact that the studs of the studded web of the present invention do not form airtight buoyant cells, but act as spacers to form an air gap between the sheet or plate of the studded web and the structure to be protected. With the proposed amendments, the subject of both claim 1 should be new over the cited document D1= US 4,628,549 (Lazar).

Please find further enclosed an English leaflet of the applicant Ewald Dorken AG. The leaflet is meant for the US and Canadian markets.

The leaflet contains valuable information for your understanding of the invention.

It shows the actual version of the studded web that is now used by the applicant. The applicant has not produced a studded web yet according to the invention with reinforcing means fixed to the marginal strip. With the exception of the not yet used reinforcing means, the studded web shown in the leaflet corresponds to the embodiment of fig.1 of the patent application.

A second version not shown in the leaflet and in the application is also produced by the applicant, which has an additional non-woven fleece at the open base of the studs (right side of fig. 2 of the application). For this second version, the volume of the studs is still not airtightly or watertightly isolated from the environment because the non-woven fleece is pervious to air and water. However, the studs are no longer open at one side (right side of fig. 2 of the application) but this side is covered by the non-woven fleece.

Referring to the inventive step involved at the invention, it is noted that the average man skilled in the art will not tend to involve into consideration the pool cover of D1 to improve studded webs for building purposes known for instance from Norwegian patent 107 188. Pool covers and studded webs for building purposes have totally different fields of use and totally different aims.

Pool covers are used for covering swimming pools so that during the cooler part of the swimming season the pool cover will retain the heat in the swimming pool and additionally allow the water to be heated by sunlight. The covers float on the swimming pool water but will allow the sun's rays to pass through the covers and heat the water in the pool. During cooler periods, these covers prevent loss of heat from the water in the swimming pools (D1 column 1 line 12 - 22). Pool covers are exposed to long-term and extreme sunlight and to long-term wetness from below (pool water) and from above (rain).

Therefore, a pool cover must be made of floatable and translucent plastic material. It must be absolutely resistant to sunlight and/or water, even when this water contains chemical additives like chlorine as most pool water.

On the other hand, the demands on resistance against mechanical forces are quite moderate for pool covers. It is for instance not expected that anyone runs on the pool cover. Therefore, the pool cover of the example of D1 consists of relatively thin plastic films (thickness 0.2032 mm and 0.07062 mm, respectively, please see D1 column 13 lines 1 and 2). The low density polyethylene material used for the embossed film and the backing film of the pool cover of D1 does not possess high tenacity. Even if the thicker embossed film of the pool cover of D1 remains intact when a mechanical force acts on the pool cover, it is sufficient that the much thinner backing film at one embossment is punctured to destroy the buoyant effect of this embossment cell.

In contrast to this, the studded web of the present invention must withstand very high mechanical stresses when fixed to the structure to be protected. The surrounding soil applies a very high pressure on the studded web. Nevertheless, the studs must remain stable to the high pressure to maintain a stable isolating air gap between the sheet or plate of the studded web and the building structure to be protected. Especially when initially loose soil (i.e. after filling the trench) gradually stabilizes and "settles", these forces also often have a strong component directed parallel to the studded web.

Therefore, the studded web is not only made of high tenacity material like high density polyethylene (HDPE), but is also substantially thicker than the pool cover sheet. The studded web thickness of the first embodiment of the application is 0.6 mm.

For these reasons the expert will be prevented from taking into consideration the pool cover of D1 when thinking about ways to improve the known studded webs for building purposes.

Referring to the document D2 = US 4,653,241 (Bindi) we remark that the continuous flexible insulation roll of D2 does neither show any studs nor does it show any reinforcing means fixed to its marginal strip. Therefore, we can see no possibility that the subject of D2 will lead the expert to the present invention.
