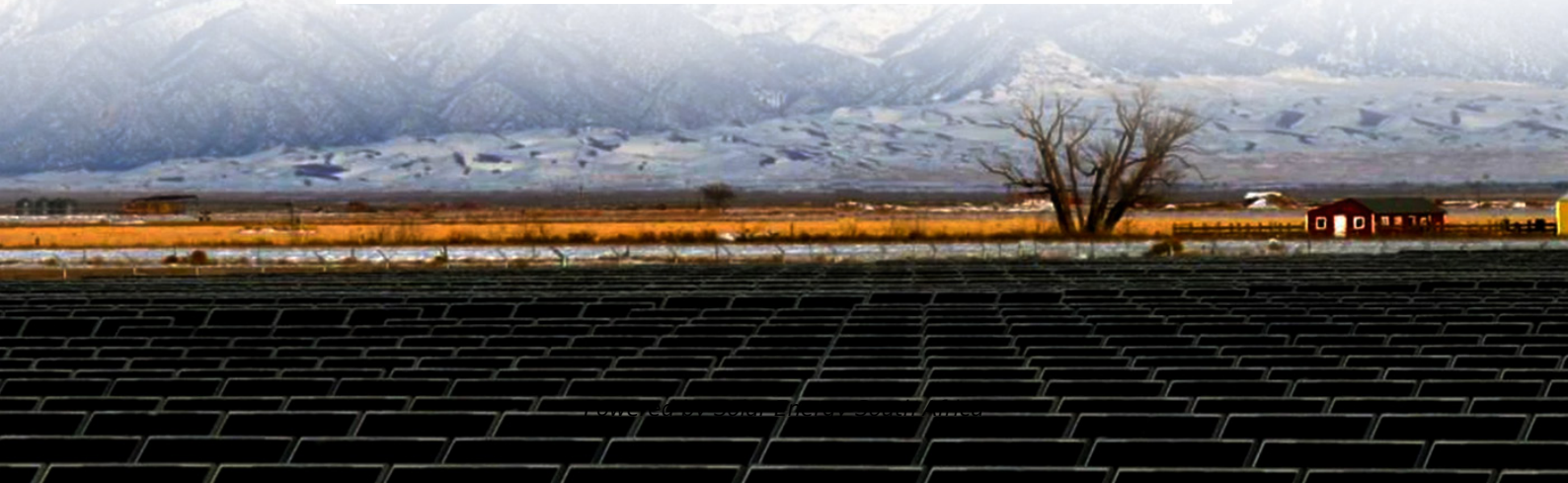


Solar Energy South Africa

Construction specification of photovoltaic panel waterproofing trough



Overview

What is a fully integrated photovoltaic roof?

Figure 1. Fully integrated photovoltaic (PV) roof “RIS.” The solutions that have been proven fall into the following categories: Interlocking panel systems, which either use panels that mimic roofing tiles with the photovoltaic (PV) element embedded in the surface or have a frame bonded to the PV panel which provides the sealing interlock.

Can a PV system be used on a roof?

Most types of roof have been used with a PV system at some time. The overall construction must be capable of taking the additional load of the PV (or indeed survive the additional uplift when the PV replaces a much heavier roof surface such as concrete tiles).

What is a PV roof?

PV slates and shingles are a more unusual product, but a niche market has developed for aesthetic PV roofs. The advantage of using a traditionally mounted roof product is that normal building trade practice can be used, and there is little resistance to the concept from the naturally conservative building trade.

How much does a PV panel weigh?

Many standard PV laminates are fairly lightweight in roofing terms. The panels themselves may only weigh 10 kg/m², and perhaps another 5 kg/m² for an aluminum mounting structure. However, a double glazed panel with a double glass front PV in a structural roofing system may add up to a total of 40 kg/m².

Should PV panels be over-roof mounted?

The over-roof mounting of PV panels has been the normal practice in many installations. It is simple in concept, and has been proven provided that the

attachment through the traditional roof is performed well.

Does a PV roof have a glass external surface?

The external surface will have to resist degradation from UV, wind, and rain for 30–60 years. This can be achieved for roofs with traditional materials, but is hard to demonstrate for new materials. Hence most PV on roofs has a glass external surface. 1.7.1. Sublayer membranes

Construction specification of photovoltaic panel waterproofing trou



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IKO Elements solar PV flat roof systems , IKO Group UK

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