Restoring quickly a roofing in the mountain

It's the ideal solution for the recoveries of the old roofs due to its performance features.

A magnificent manor, which has been recently undergone a restoring of the roofing, stands in a magic and stimulating context, surrounded by vegetation, protected on one side by rounded mountains ridges and on the other side by the lake of Iseo.
The dwelling reflects the typical mountain architecture with a vertical masonry structure showing the stones and the horizontal partitions, floors and ceilings of beechwood. Stone has been mainly used for the masonry, the arches, the vaults and the covering surface while wood has been used for the horizontal structures and the roof.
In fact beechwood has a high resistance to the bending stresses; elements of remarkable slenderness have been obtained from the straight wood trunks used in the main frame beams.
The roofing is with two pitches which aren't too inclined in order to avoid the sliding of the mantle of snow that could drag the roofing sheets during the falling. The last ones are made of concrete and in fact are simply leaned on.
The works have been extended for about 2 weeks and were strongly wished by the property in order to obtain a reduction of the inner heat dissipation and an economic advantage of the consequent reduction of the expenditures of energy.
About 400 m^2 ISOVENTILATION of 80 mm have been used manufactured by STIFERITE in Padua.
ISOVENTILATION is a heat insulating panel of rigid expanded polyurethane specially planned for the realisation of flat and inclined roofing; its physical – mechanical features makes it an ideal product for the construction of airy and micro-airy roofs, roofing realisations with battens, with Canadian tiles, with sheets, etc.
It is composed of an expanded polyiso foam insulating component, protected on the lower side by a saturated micro-perforated glass coating while it is protected on the upper side by a kind of micro-perforated waterproof fabric coating. This technical shrewdness makes the product permeable to vapour but completely impermeable to water (WDD: 620; η: 43; sd: 0,04). The coating avoids possible infiltrations even when the upper finish would be damaged.
The expanded polyiso foam insulating component makes the ISOVENTILATION panel particularly suitable to support the high temperatures (+90/110ºC) which are accumulated on the protection element exposed to solar irradiation thus giving the product a thermal conductivity (lD: 0,028 W/mK).
Two multi-layer wooden fillets are incorporated inside the foam emerging under the upper coating which runs along the entire length of the panel. The wooden fillets allow removing the bearing frames which form the thermal bridges in the coating thus allowing an easy fixing of the panels on any structure: with self-tapping screws on wood, with expanding screws on latero-cement and concrete.
The technical detail of the battens which furthermore facilitates the next fixing of the counter-battens is noteworthy due to an important saving both regarding the working times as well as the economic aspect. The product has standard dimensions of 120x240 cm, with 50-60-80-100 mm thicknesses; it is profiled and hammered on the long sides which simplify the laying and guarantees the perfect alignment. The sealing of the joints has been carried out with a watertight self-adhesive strip while the fixing of the omega

profiles on the wooden battens happens according to the tile pitch with the advantage to use any tile with a unique insulating kind of panel.
Therefore the roof stratigraphy is composed as follows: first the beechwood basis with a transparent fabrics layer for the vapour barrier, then the ISOVENTILATION panels of 80 mm thickness and at least the battens. The panels have been linked among them with an iron-on strip.
During a follow-up carried out in the following months after the end of the works, the property and the company in charge of the laying have expressed their satisfactions both for the rendering of the materials as well as for the simple use and laying of them.

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Captions

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Details of the roof with already placed panels

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Two details of the valley and overview of the site

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Material lain with steel battens before the laying of the tiles, detail of the protruding part of the pitch and roof finished with the ridges.