

SAVE AGE – Eco friendly RCHEP in Turin with the “films”

A large suburban residence in liberty style was built in 1933 in Turin. In 2010 an extensive renovation and re-conversion to a RCHEP for elderly and diseased persons was conducted. This should especially be taken into account the sustainability of the construction project.

The sustainable nursing home was designed and renovated by an important and well known American company that provided its experience in energy efficiency, supporting the stakeholder of the foundation.

The expert support and material choice in the design phase has made this energy efficiency renovation possible, and now we have a new sustainable and energy efficient nursing home in Turin.



Figure 1 External view of CG home

The building was converted into a nursing home and a health centre for the F.M.R.I. foundation (Infantile Rare Disease Centre). It was built with the help of green building techniques and the last technology for heating systems.

The [CG](#) home has the primary goal to protect its residents against external harmful factors like pollution using a small amount of energy and respecting nature.

How was it possible? A great improvement for energy efficiency could be achieved by using two types of advanced transpire Tyvek film all around the facade and especially on the roof.

The installed films were *Tyvek Soft “Wood Bianco”* and *“Tyvek Enercor Roof”*. These films were selected for their special characteristics, that permit a high water vapor permeability and thanks to a low emissivity of its metalized surfaces that reflect the summer heat and can reduce the heat loss in the winter.



Figure 2 A picture of the used panels for insulation and to cover the film

Thanks to this high breathability, the film can also assure a correct moisture diffusion inside the home, with a high comfort and “time proof” building.

The CG home is located on the left of Po river’s edge, in front of a huge green park called Valentino and on the side of San Vito hill, not far from the main Turin hospitals.



Figure 3 Roof view with the solar thermal and photovoltaic panels

The building has been imagined to secure high wellness to all residents. All the used materials, starting from the furniture for decoration, plaster and textile, has been chosen for their compatibility with environment and residents’ health.

For these reasons, energy efficient correlated measures, are inspired to a new way to live the house; the aim is to keep in mind that we must follow a balance between the person and the ecosystem, that represent a novelty in Italy.

To achieve this goal, the film has been installed inside the external part of the supporting structure, between two 6 cm thick insulating panels composed of cellulose, wood and cork fiber.

Thanks to this configuration it is possible to ensure a high insulation, a good inside comfort and a long-term performance.

All used materials are natural and ecological and the roof renovation always should be the starting point to reduce energy consumption.

Plaster and paint with natural lime, cellulose, wood and cork fiber has been protected against sun and rain with flax oil and beeswax.

Next to these measures, the residential CG home, has also implemented another solution to save energy : solar thermal panels that can produce up to 60% of the hot water needed and photovoltaic panels of 9,12 Kwp that provide about 60% of yearly electric energy consumption.

Source:

[1] <http://www.zeroemission.eu/portal/news>