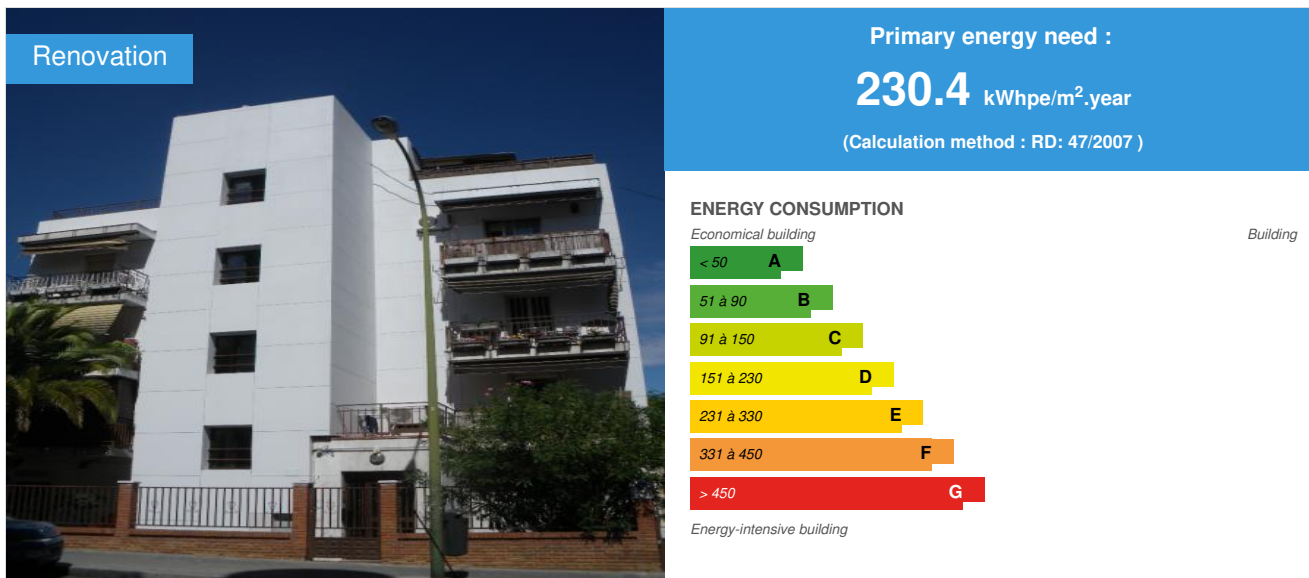


Building of apartments in 4, Agastia St.

by Helena Platas / 2012-07-09 12:43:59 / España / 7276 / ES



Building Type : Collective housing < 50m
Construction Year : 1978
Delivery year :
Address 1 - street : Agastia 4 28027 MADRID, España
Climate zone :

Net Floor Area : 790 m² Superficie útil
Construction/refurbishment cost : 68 530 €
Number of Dwelling : 8 Dwelling
Cost/m2 : 86.75 €/m²

General information

The renovated building is located in Madrid Agastia St. , and it was built in 1978. It consists of 800 square meters of facade and 8 individual dwellings. The main part of this renovation project was the installation of 14 cm of mineral wool insulation for ventilated facade. The first 8 cm, URSA TERRA Vento mineral wool was installed and the rest 6 cm URSA TERRA Vento Plus.

The total cost of the performance was of 68 525 euros and thanks to the high thermal resistance of the insulation (RT = 4 m² • K / W) material , the owners have been able to accommodate the maximum grant aid provisions- 33% of the total cost of intervention. The amount of the aid received through the facades Renewal Plan has been of 23,983 euros, so that each neighbor has made a payment of 5,500 euros. On the other hand, thanks to this energy rehabilitation investment, the payback of this renovation for the residents has been calculated over 4.4 years. The average total consumption of energy in both heating and cooling of each of the apartments was 2,147.03 euros before installing the insulation. After insulating works, it is expected to reduce the energy invoice for heating and cooling into 874€/year per apartment, which is a total savings of 1273.03€/year.

Data reliability

Self-declared

Stakeholders

Stakeholders

Function : Manufacturer

URSA

Helena Platas

<http://www.ursa.es/2531.htm>

Function : Developer

Comunidad de Vecinos

Calle Agastia 4

Function : Environmental consultancy

Owner approach of sustainability

Owners wanted to get an energy renovation of the building, with an aesthetic modification in it. Therefore, it was decided to use an external system of insulation that could achieve these two objectives, without scarifying the interior space of the dwellings.

Architectural description

Before refurbishment: Façade description: 12 cm ceramic brick + 3 cm air gap + 4cm ceramic light brick + gypsum plaster
After refurbishment: Façade description: External cladding made in reinforced cement boards + 3 cms air gap + 8 cm thermal insulation Mineral wool URSA TERRA Vento + 6 cm thermal insulation Mineral wool URSA TERRA VENTO PLUS + 12 cm ceramic brick + 3 cm air gap + 4cm ceramic light brick + gypsum plaster

If you had to do it again?

They would do it again. In fact, homeowners are also thinking to renovate the roof with similar high level of insulation.

Building users opinion

They have reduced the energy consumption for air conditioning during the day in summer

Energy

Energy consumption

Primary energy need : 230,40 kWhpe/m².year

Primary energy need for standard building : 261,00 kWhpe/m².year

Calculation method : RD: 47/2007

Final Energy : 128,00 kWhfe/m².year

Breakdown for energy consumption :

Total energy losses saving: 86%

Total savings on energy bills: 50%

- Heating: 52%

- Cooling: 41%

More information :

Consumption 336 kWh/m²/year

290 kWh/m²/year in heating

46 kWh/m²/year in cooling

Initial consumption : 230,40 kWhpe/m².year

Envelope performance

Envelope U-Value : 0,21 W.m⁻².K⁻¹

More information :

U-value before renovation: 1.58 W/m²K

Building Compactness Coefficient : 0,15

Indicator : HE1 BD

Systems

Heating system :

- Individual gas boiler

Hot water system :

- Gas boiler

Cooling system :

- Reversible heat pump

Ventilation system :

- Natural ventilation

Renewable systems :

- No renewable energy systems

Environment

GHG emissions

GHG in use : 22,18 KgCO₂/m²/year

Methodology used :

EN 13790

GHG before use : 136,20 KgCO₂/m²

Building lifetime : 70,00 year(s)

Products

Product

URSA TERRA Vento Plus

URSA

webmaster.ursaiberica@uralita.com

<http://www.ursa.es/>

Product category : Acabados / Acabado, aislamiento

URSA TERRA Vento Plus is a mineral wool panel with a thermal conductivity of 0.032 W/mK (UNE EN 13162). Its facing protects the mineral wool core from water that could filter into the ventilated plenum of the facade. The black colour of the facing gives the facade a smart appearance during installation and especially when cladding is finished.

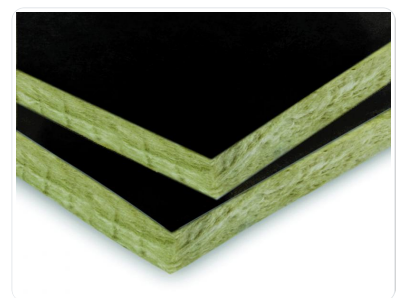
Excellent thermal insulation. URSA TERRA Vento Plus offers one of the best thermal conductivities in the market.

Excellent acoustic insulation. URSA TERRA Vento Plus panels increase the acoustic performance between 7 and 10 dB, optimizing the acoustic comfort in buildings.

Excellent response to fire. Incombustible behavior (reaction to fire A2 s1 d0) not only is essential in case of fire to avoid the propagation of fire to upper floors but also meets the new Building Code requirements.

Water repellence. Panels are covered with a black facing that protects against climate exposures.

Storage and transport. High compressibility allows the space needed for its storage in warehouses or trucks to be optimized.



URSA TERRA Vento

URSA

webmaster.ursaiberica@uralita.com

<http://www.ursa.es>

Product category : Acabados / Acabado, aislamiento

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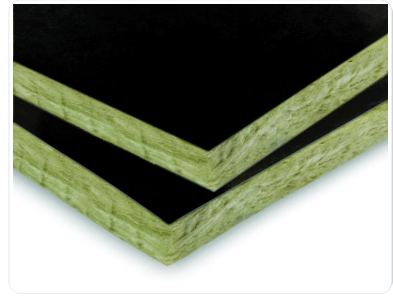
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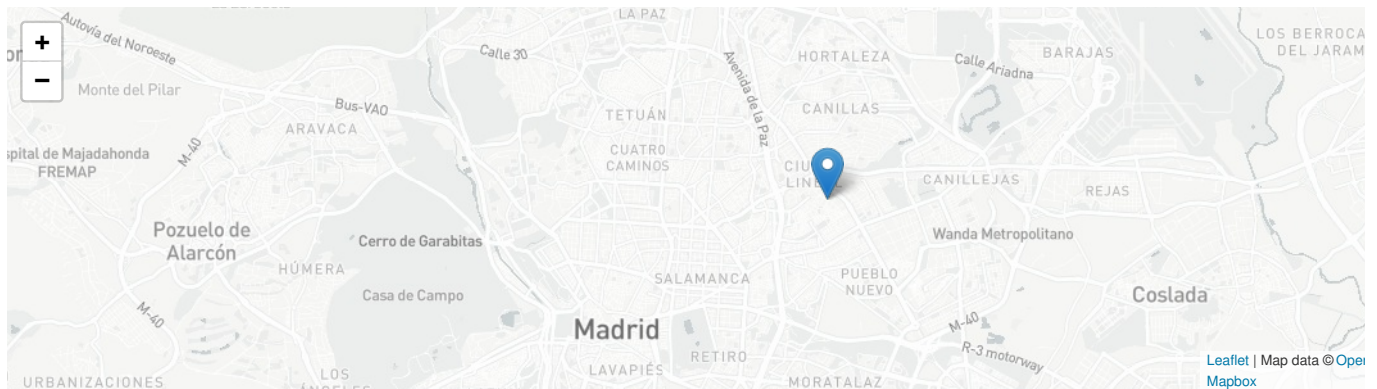
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Costs

Energy bill

Forecasted energy bill/year : 6 992,00 €



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