

## ENERGY ECO-EFFICIENCY. TOWARDS A SUSTAINABLE CONSTRUCTION



*Architects and the rest of the professionals of the building industry agree in highlighting the excellent qualities of the Natural stone, as well as its low energy consumption needed to produce 1 Kg of this material in comparison with other materials such as ceramics.*

The growing energy consumption happened in the last two decades in all western countries, is obtaining as a result the exhaustion of the natural resorts as well as the emissions to the atmosphere and the side effect brought to the environment, clearly justify that each day is more and more important to make a little effort once establishing the guidelines which guarantee the rational use of different materials generally used in the building industry.

That is why it is each times more convenient analyzing the whole constructions and zone developing process of the cities in energy terms, assessing the quantity of energy used in housing's constructions and in the building land development.

That is why among the different sources that we can consult we have well considered as representative and reliable data, the values published in the book "Guide to a sustainable construction" by IDAE .Ministry of public works, dated 1995.

In this publication we can see the following energy consumption values for different materials used in the building industry:

### BINDING MATERIALS

Concrete 1,1 MJ / Kg

Gypsum 3,3 MJ / Kg

Cement 7,0 MJ / Kg

### COATINGS

Wood 3,0 MJ / Kg

Brick 2,9 MJ / Kg

Stone cladding 0,8 MJ /Kg

### AGGREGATES

Sand 0,1 MJ / Kg

Gravel 0,1 MJ / Kg

We can appreciate the low energy cost of natural materials such as sandstones, gravel and natural stone

compared to other industry manufactured materials such as ceramics (bricks), gypsum or cement.

This fact together with the excellent qualities showed over the years by the natural stone reinforces the idea that the professionals of the sector are aware of it and that they want to set the trend of incorporating in their projects materials such as the natural stone.

Therefore obtaining a double effect, taking advantage of the qualities of this noble material reducing the energy consumption and the emissions to the atmosphere and making a sustainable construction in balance with the environment.

Fuente: Atekra Stone