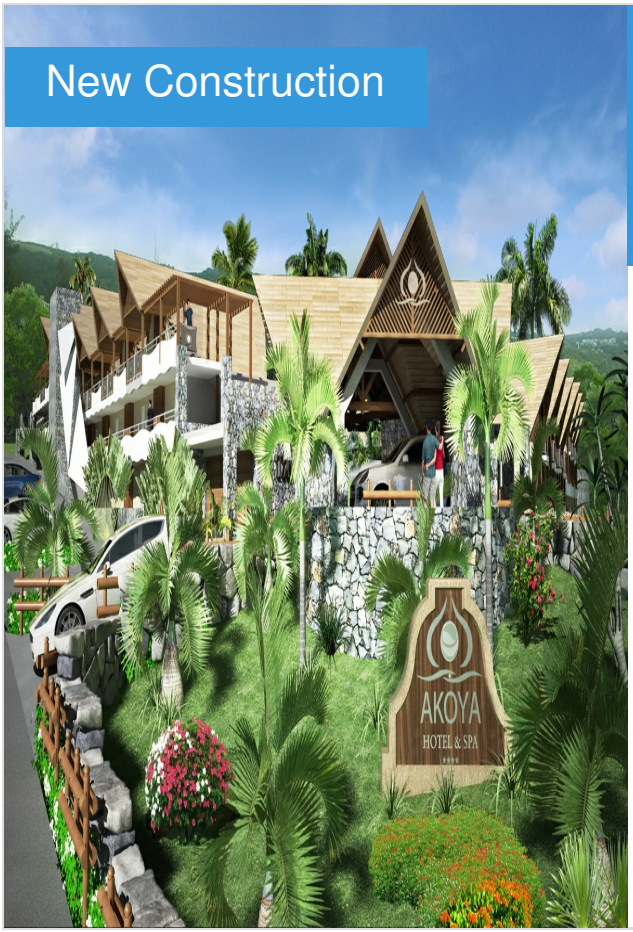
Akoya Hotel ***** & Spa

by Galdric Sibiude / 2017-05-22 15:17:34 / France / 8901 / FR



Primary energy need :

61 kWhep/m².an

(Calculation method : Other)

ENERGY CONSUMPTION

Economical building *Building*

- *< 50* **A**
- *51 à 90* **B**
- *91 à 150* **C**
- *151 à 230* **D**
- *231 à 330* **E**
- *331 à 450* **F**
- *> 450* **G**

Energy-intensive building

Building Type : Hotel, boarding house
Construction Year : 2016
Delivery year : 2016
Address 1 - street : 6 Impasse des Goélands 97434 LA SALINE-LES-BAINS, France
Climate zone : [Af] Tropical Wet. No dry season.

Net Floor Area : 11 712 m²
Construction/refurbishment cost : 13 000 000 €
Cost/m2 : 1109.97 €/m²

General information

The design objective and the architectural part of the hotel Akoya, on the island of Réunion, is to encourage its integration on the territory and to look for innovative solutions to improve its energy efficiency. A bioclimatic design adapted to the tropical environment has made it possible to reconcile the requirements of a high-class hotel with those of the Green Globe label to attest to the approach followed by the project manager and the will of the Client in terms of Sustainable building.

This label extends beyond the energy and environmental aspects to integrate a social dimension. Taking it into account at the start of the project, it is possible to encourage the implementation of actions to make this hotel a sustainable building. This label highlights the efforts made by the hotelier to reduce its carbon footprint in order to offset the greenhouse gas emissions involved in transport to the island.

The Akoya Hotel became the first Green Globe certified building in Reunion.

For more information: http://www.akoya-hotel.com

AKOYA HOTEL ***** & SPA, The Pearl of the Indian Ocean

Sustainable development approach of the project owner

Special efforts have been made on the choice of materials and technical solutions to favor materials with lower environmental impact and to reduce the energy consumption of the hotel. So the earthworks were optimized and the materials available on the plot valued. A storm water treatment solution has been proposed (retention basin). Landscape work has been requested to respect biodiversity in order to preserve endemic species. To make these efforts possible, the Client wished to have the Green Globe certified. This highlights the involvement and efforts of the various players while integrating the requirements of a luxury establishment. This challenge, to integrate from the start a high level of demand, allows in the long term to promote the integration of the building in its environment, at the ecological level (water management, reconciliation with recycling organizations) and social (Link with associations and local trade). AKOYA HOTEL & SPA has met the requirements of the Green Globe certification standard on more than 350 compliance indicators and has been certified on 14 June 2017. NB: The cost indicated covers the entire building with finishing (floor covering, wall, ceiling) and building related equipments (plumbing, DHW, HVAC, including kitchen) and swimming pool. It does not cover furnishings and furnishings.

Architectural description

AKOYA Hotel ***** & Spa is set in a 3-hectare park planted overlooking the Trou d'Eau lagoon. The hotel combines contemporary architecture with the charm of Creole heritage. It favors in particular the opening towards the outside to promote natural ventilation. The establishment takes particular care of the architecture of its outdoor spaces framed by an exceptional natural setting. The whole project was carried out with the aim of making the best use of a bioclimatic design to reduce energy consumption while maintaining a high level of comfort. The constraints of the Green Globe label have largely influenced the environmental quality of the building through the requirement of means. The integration of this desire to create an environmentally friendly structure at the start of the project also led to the creation of a green building site charter.

Building users opinion

https://www.youtube.com/watch?v=56UhafrvPps

Stakeholders

Stakeholders

Function : Contractor

La Financière Janar

engeltolassy@janar.fr

Function : Construction Manager

BE GREEN Engineering

g.sibiude@begreen-engineering.com

http://www.begreen-engineering.com/index.php/fr/

Intervention as a technical design office (outside landscaping and kitchens).

Function : Designer

Archivisiotech

archivisiotech@architectes.org

Function : Other consultancy agency

Helios Paysage

helios_paysages@yahoo.fr

Landscape Architects

Function : Other consultancy agency

CARTE LIBRE

cartelibre@yahoo.fr

Engineering office

Contracting method

Separate batches

Type of market

Global performance contract

Energy

Energy consumption

Primary energy need : 61,00 kWhep/m^2.an

Primary energy need for standard building : 101,00 kWhep/m^2.an

Calculation method : Other

Real final energy consumption

Final Energy : 24,00 kWhef/m^2.an

Real final energy consumption/m2 : 109,00 kWhef/m^2.an

Year of the real energy consumption : 2 016

Envelope performance

More information :

The solar factors of the opaque walls were evaluated so as to minimize the solar contributions and thus reduce the need for refrigeration.

The Ubat value is irrelevant to the location of the project. Similarly, air tightness is not an

adequate criterion in a project where natural ventilation has been favored.

More information

Obtained with ClimaWin for all uses outside kitchens and pool / spa. Although RTAA DOM is not applicable to the hospitality industry, the main principles have been adopted. The standard value is proposed on the basis of a scenario without optimization of energy consumption (GTC for lighting, room badge, optimized insulation, CO2 sensor).

Renewables & systems

Systems

Heating system :

- No heating system

Hot water system :

- Solar Thermal

Cooling system :

- Tape
- VRV Syst. (Variable refrigerant Volume)

Ventilation system :

- Natural ventilation
- compensated Air Handling Unit

Renewable systems :

- Solar Thermal

Renewable energy production : 62,00 %

Other information on HVAC :

Utilization of elevation opening and a large fan for cooling of the restoration piece by avoiding the energy consumption of a number of air conditioners

Renewable energy systems only deal with the production of DHW. The posted percentage of coverage is for this item only.

Smart Building

BMS :

Use of a GTC for tracking of cooling, lighting and DHW. Coupled with presence detectors, clocks and the use of card in rooms

Users' opinion on the Smart Building functions : Instant control of the consumption which allows a human expertise to come to refine the adjustments in addition to the regulation systems

Environment

Urban environment

Land plot area : 32 000,00 m^2

The hotel is ideally located. Close to the beach (avoiding transport to this place). The green spaces of the plot offer a closeness to nature.

Products

Product

MRK21

URSA

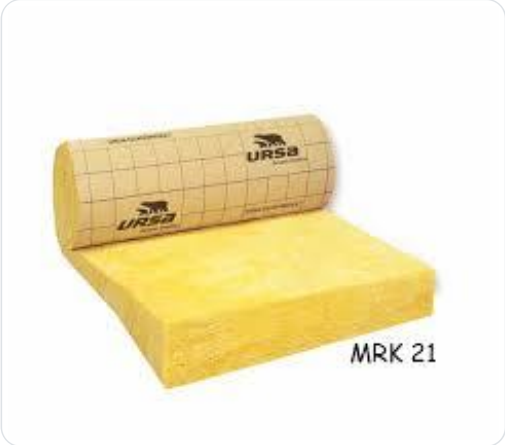
contact.fr@ursa.fr

https://www.ursa.fr/

Product category : Finishing work / Partitions, insulation

Improved solar factor in the roof to improve thermal comfort and reduce the use of air conditioning

Product whose implementation is controlled by the teams



Costs

Construction and exploitation costs

Total cost of the building : 13 000 000 €

Health and comfort

Water management

Consumption from water network : 7 949,00 m^3

Water Consumption/m2 : 0.68

Water Consumption/Bedroom : 74.29

Carbon

GHG emissions

GHG in use : 96,00 $KgCO_2/m^2/an$

Methodology used :

In operation (GHGs of electricity, refrigerated gases and business travel). Calculated according to the approach required by the Green Globe certification with the emission factors of the ADEME GHG Assessment database

Life Cycle Analysis

Eco-design material : Valorization of blocks of stone from the plot Use of local wood framing

Contest

Reasons for participating in the competition(s)

Hôtel de luxe en milieu tropical à consommation énergétique réduite grâce à une conception bioclimatique et la mise en oeuvre de systèmes de ventilation et refroidissement adaptés

Building candidate in the category

Energie & Climats Chauds

Coup de Cœur des Internautes

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