

# SEMI OLYMPIC SWIMMING POOL COVERED IN SIDI YOUSSEF BEN ALI

by [anass AMAZIRH](#) / 2021-03-25 18:16:42 / Maroc / 28895 / FR



New Construction

Primary energy need :

**73** kWh/m<sup>2</sup>.an

(Calculation method : Other )

**Building Type** : Swimming pool

**Construction Year** : 2016

**Delivery year** : 2018

**Address 1 - street** : Sidi Youssef Ben Ali 40000 MARRAKECH, Maroc

**Climate zone** : [Cbc] Mild, dry winter, warm and wet summer.

**Net Floor Area** : 1 845 m<sup>2</sup> NGF

**Construction/refurbishment cost** : 1 524 818 €

**Number of Shower/day** : 720 Shower/day

**Cost/m<sup>2</sup>** : 826.46 €/m<sup>2</sup>

## General information

The semi-Olympic swimming pool covered in Sidi Youssef Ben Ali in Marrakesh, swimming pool of last generation, it was coordinated and piloted by the regional direction of the ministry of youth and sport of a superficiecouverte of 1.387 m2, the swimming pool, includes a semi olympic basin (6colors), public stands and officials with a total capacity of 200 places, fitness room, cloakroom showers for men and women, infirmary, space for judges, a reception area, a desk management and sanitation. This building meets international swimming standards and sustainable development requirements such as

The installation of a light timber frame laminated with a structure and decking thus significantly reducing the dimensions of the reinforced concrete poles with a span of 28 m

The installation of an insulation of the external walls, roofing with an extruded polystyrene XPS and an insulation of the walls of the pool of swimming, the underside of the beach, the water cover with a polyurethane sprayed and insulation of all ventilation and plumbing ducts.

The installation of smoke outlets on the roof, in order to reduce the use of electric lighting during the day and reduce the use of electric lighting during the day

Use of PAC heat pumps for hot water production in the swimming pool

12 solar panels for hot water production (showers)

Use of showerheads and sinks to reduce water consumption and flush toilets with two tank capacities

The treatment and disinfection of the pond water by ultraviolet treatment and sand filter

With a sober architecture, it combines a contemporary and contemporary aesthetic that meets the requirements of the program and the functionality of the use of this sports equipment.

## Data reliability

Self-declared

## Stakeholders

### Contractor

**Name :** MINISTERE DE LA JEUNESSE ET DES SPORTS DELEGATION DE MARRAKECH

**Contact :** M. KHYRAT directeur régional de Marrakech Safi 05 24 44 89 44 – 05 24 44 76 65

<http://delegation.mjs.gov.ma/marrakech/>

### Construction Manager

**Name :** AMAZIRH ARCHITECTES

**Contact :** ANASS AMAZIRH architecte principal 05 22 0 30 20 52 email: anass@amazirh-architectes.com

<https://www.amazirh-architectes.com/>

### Contracting method

Other methods

### Owner approach of sustainability

the guideline of the project is to realize a building with international standards saving the maximum energy for the heating of the basin, sanitary hot water, recovery of heating energy and smoke extraction.

### Architectural description

This building responds in several points to the principles of sustainable development:

- The establishment of a light framework glulam
- Structure and decking thus significantly reducing the dimensions of reinforced concrete columns with a span of 28 m
- Insulation of exterior walls, roof with extruded polystyrene XPS
- Insulation of the walls of the swimming pool, the underside of the beach, the water cover with sprayed polyurethane and thermal insulation of all ventilation and plumbing ducts.
- Installation of smoke vents on the roof, to reduce the use of electric lighting during the day, reduce the use of electric lighting during the day and to ventilate naturally
- Use of PAC heat pumps for hot water production in the swimming pool
- 12 solar panels for the production of sanitary hot water (showers)
- Use of LED lighting equipment
- Use of showerheads and washbasins to reduce water consumption and flushes with two tank capacities
- Creation of a well for watering the garden
- The treatment and disinfection of the pond water by ultraviolet treatment and sand filter

### If you had to do it again?

use of shower water recovery for toilet tanks and establishment of a GTC

### Building users opinion

very happy

## Energy

## Energy consumption

Primary energy need : 73,00 kWh<sub>ep</sub>/m<sup>2</sup>.an

Primary energy need for standard building : 104,00 kWh<sub>ep</sub>/m<sup>2</sup>.an

Calculation method : Other

## Renewables & systems

### Systems

Heating system :

- Heat pump

Hot water system :

- Heat pump

Cooling system :

- Reversible heat pump

Ventilation system :

- Double flow

Renewable systems :

- Solar photovoltaic

The use of solar water heaters reduces annual consumption by 30%.

## Environment

### GHG emissions

GHG in use : 5,48 KgCO<sub>2</sub>/m<sup>2</sup>/an

## Products

### Product

TOPOX

manorbois

manorbois

<http://www.manorbois.com/>

Product category : Table 'c21\_germany.innov\_category' doesn't exist  
SELECT one.innov\_category AS current,two.innov\_category AS parentFROM  
innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '7'

INSULATOR CUBER SL

MAGNIFICENT

## Costs

### Construction and exploitation costs

Renewable energy systems cost : 450 000,00 €

Cost of studies : 175 000 €

Total cost of the building : 2 100 000 €

## Energy bill

Forecasted energy bill/year : 10 000,00 €

Real energy cost/m<sup>2</sup> : 5.42

Real energy cost/Shower/day : 13.89

## Urban environment

the building is located in a sports complex in a popular area of the city of Marrakech

## Land plot area

Land plot area : 4 260,00 m<sup>2</sup>

## Built-up area

Built-up area : 1 845,00 %

## Green space

Green space : 2 120,00

## Parking spaces

640

## Building Environnemental Quality

### Building Environmental Quality

- Building flexibility
- comfort (visual, olfactive, thermal)
- water management
- renewable energies
- products and materials

## Contest

### Reasons for participating in the competition(s)

This building responds in several points to the principles of sustainable development:

The installation of a light timber frame glued laminated

Structure and decking thus significantly reducing the dimensions of reinforced concrete columns with a span of 28 m

Insulation of exterior walls, roof with extruded polystyrene XPS

Insulation of the walls of the swimming pool, the beach, the water cover with sprayed polyurethane and insulation of all ventilation and plumbing ducts.

Installation of smoke vents on the roof, to reduce the use of electric lighting during the day and reduce the use of electric lighting the day

Use of PAC heat pumps for hot water production in the swimming pool

12 solar panels for hot water production (showers)

Use of LED lighting equipment

Use of showerheads and sinks to reduce water consumption and flush toilets with two tank capacities

Creating a well for watering the garden

The treatment and disinfection of the pond water by ultraviolet treatment and sand filter

### Building candidate in the category

Building Candidate in the Category



Energie & Climats Chauds



GREEN  
SOLUTIONS  
AWARDS

POWERED BY Construction2log



Bas Carbone

