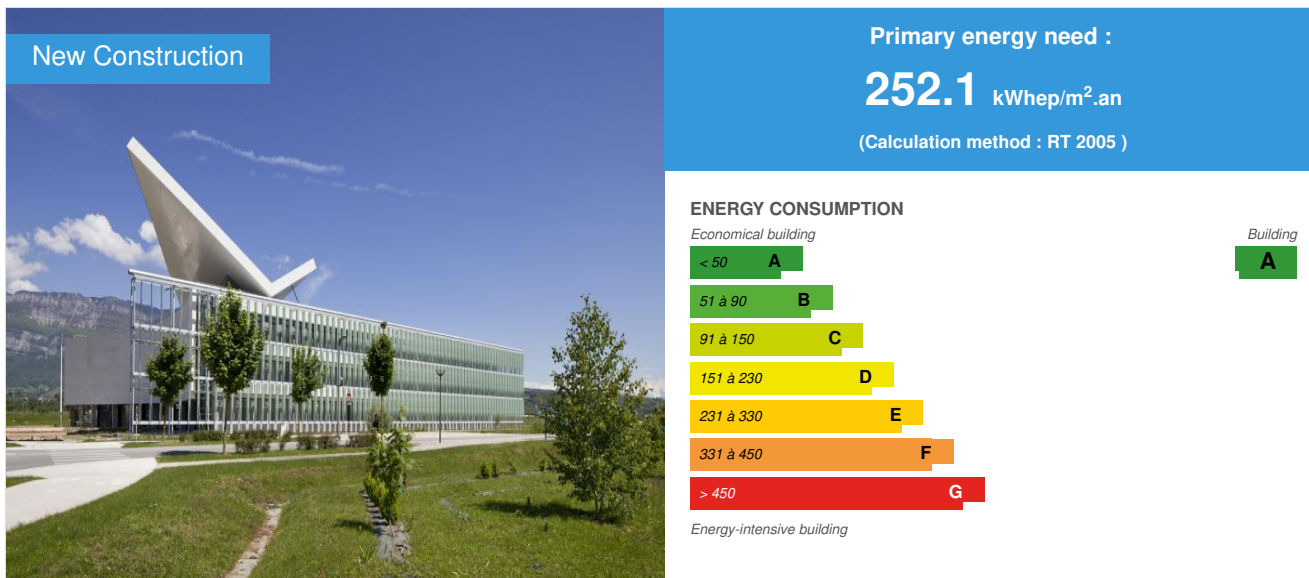


INES Chambéry

by Frédéric NICOLAS / 2014-01-29 09:38:14 / France / 11143 / FR



Building Type : Other building
Construction Year : 2013
Delivery year : 2013
Address 1 - street : Avenue du Lac Léman, Bourget du Lac 73 CHAMBÉRY, France
Climate zone : [ET] Tundra - Polar tundra, no true summer.

Net Floor Area : 8 696 m² Other
Construction/refurbishment cost : 14 195 983 €
Cost/m2 : 1632.47 €/m²

Certifications :



General information

Construction of a commercial building comprising administering INES (National Institute of Solar Energy), research laboratories and a training area.

Sustainable development approach of the project owner

The building will be a demonstrator in terms of integration of solar thermal and photovoltaic energies and renewable energies. These energy concepts will be the same component logic construction. The new building should be a copy of a simple realization consumes little fossil energy and the best use of renewable energies, including solar energies. The design and realization of the new building will be taking into account the concerns and the following requirements: a realize a high building energy performance, ensure the sustainability deaths performance over time, maintain a good acoustic comfort, predict an integrated management of flows water, taking into account the waste management. This includes making Reflected orientation of body buildings and facades, both vis-a-vis the sun as prevailing winds, a careful choice of materials, developed an optimum ratio of facades and roof surfaces constructed with respect to a reflection on the thermal inertia of the building, the quality of thermal insulation, the tightness of the building.

Architectural description

Our building is designed both as a prototype and a manifesto. Its simple but rigorous spatial organization demonstrated the technical feasibility and architectural a gait founded on the principles of sustainable development: versatility and flexibility of use, efficiency energetics, reduction of environmental impacts, quality of space and comfort for users, etc.. This citizen approach to architectural design says here its relevance, new type of dialogue with the public space and landscape, its new symbolic. The competition from 2007 and design research in 2008, the building is very ahead of its time.

Building users opinion

Occupants have just emmenager (delivery in 2013).

See more details about this project

<http://frnicolas.com/projets.aspx?type=tertiaire, industrie&id=60>

Stakeholders

Stakeholders

Function : Contractor

Conseil général de Savoie

<http://www.cg73.fr/>

Function : Designer

Atelier Michel Rémon

Michel REMON

<http://www.remon.fr/>

Function : Designer

Agence d'Architecture Frédéric Nicolas

Frédéric NICOLAS

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

Function : Thermal consultancy agency

TECHNIP TPS

Immeuble le Quadrille, 30 rue E. Nieuport 69008 LYON

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

Function : Other consultancy agency

SOLENER

TULLIE Charles, 48 rue Gustave Nadaud 59000 Lille

<http://www.solener.fr>

Function : Other consultancy agency

Denis SAVOIE (Palais de la découverte) pour cadran solaire

Function : Other consultancy agency

TECSOL SA

Marie-Lyne Laquerrière

<http://www.tecsol.fr>

Contracting method

Separate batches

Type of market

Global performance contract

Energy consumption

Primary energy need : 252,10 kWh/m².an

Primary energy need for standard building : 722,18 kWh/m².an

Calculation method : RT 2005

Breakdown for energy consumption : Heating: 173.22Cooling: 2.33Fans: 17.71lighting: 9.84auxiliaries: 0.96

Real final energy consumption

Final Energy : 204,06 kWh/m².an

Envelope performance

Envelope U-Value : 0,74 W.m⁻².K⁻¹

More information :

The building, shaped recessed rectangle is composed of several blocks, reinforced concrete, structurally independent and regular shapes. Thus, for the current floors, and a full column-beam reinforced concrete slabs solution was chosen because it allows liberate large volumes and high modularity allow local. This structure is associated locally has concrete sails providing bracing and incorporating seismic forces. The carrier of the atrium structure is constituted of a metal structural slight composed of trusses. These also support the latest solar panels, photovoltaic cells and the sliding staircase for maintenance. The glass roof is horticultural type with a carrier truss structure. Semitransparent photovoltaic panels are integrated in the glass roof. The facades heat insulation is mineral type stapled, with external cladding steel cassette-type lacquer except:- The north façade which is made of raw concrete (interior insulation) with white cement finish (the thermal bridge breakers are in place).- The interior facades (atrium) including cafeteria have wood siding types (larch) three plies. External joinery facades are made of aluminum frame with thermal break.

Building Compactness Coefficient : 0,46

Indicator : I4

Air Tightness Value : 1,14

More information

Book building in 2013, recently invested by the occupants

Renewables & systems

Systems

Heating system :

- Water radiator
- Fan coil
- Wood boiler
- Solar thermal

Hot water system :

- Individual electric boiler
- Solar Thermal

Cooling system :

- Solar cooling
- Others

Ventilation system :

- Natural ventilation
- Nocturnal ventilation
- Free-cooling
- Single flow
- Double flow heat exchanger

Renewable systems :

- Solar photovoltaic
- Solar Thermal
- Wood boiler
- Solar absorption chiller

- Biomass boiler

Renewable energy production : 33,00 %

Smart Building

BMS :

INSTALLED GTC to manage the solar shading and natural ventilation. Supervise technical installations

Environment

Urban environment

Land plot area : 39 580,00 m²

Built-up area : 22,00 %

Leyse, which will pour into the lake of Bourget, north of the BIA. It is close to the airport of Chambéry, in the east.

Products

Product

CTA Menerga

Product category :

Central air handling units used for cooling laboratory via a system of evaporative cooling by drying

Health and comfort

Water management

no recovery of rainwater retention but before discharge into the network.

Indoor Air quality

comfort ventilation with heat exchanger and filtration suction and discharge.CO2 sensor in the meeting rooms.thru natural ventilation.paint has very low VOC emissions.insulation from the outside.

Carbon

GHG emissions

GHG in use : 7,00 KgCO₂/m²/an

Methodology used :

method RT 2005

Building lifetime : 50,00 année(s)

Contest





**ENTREPRISES
GÉNÉRALES DE
FRANCE • BTP**



Date Export : 20230317114510