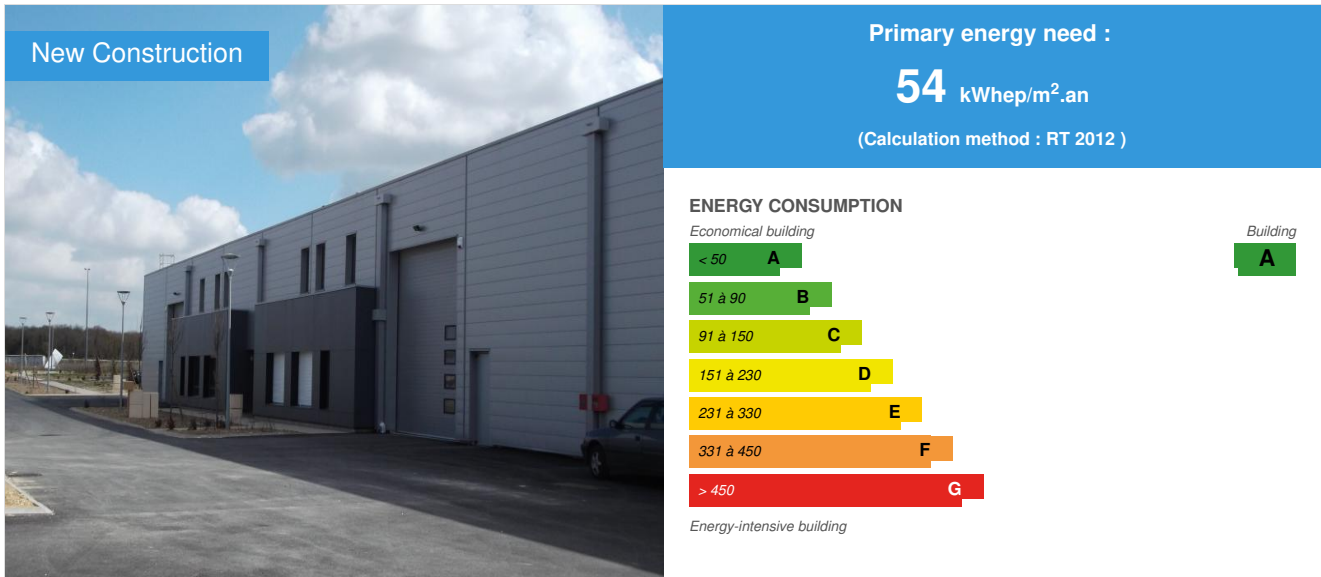


Eco Village 2 Jules Verne

by Olivier Kracht / 2014-02-20 16:20:02 / France / 8545 / FR



Building Type : Factories
Construction Year : 2014
Delivery year : 2014
Address 1 - street : avenue du superbe orénoque 80440 BOVES, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 3 420 m² SHON
Construction/refurbishment cost : 2 300 000 €
Number of Installed Kw : 30 Installed Kw
Cost/m² : 672.51 €/m²

General information

Located at the entrance of Amiens along main roads leading to Paris, Lille, Beauvais, Reims, Rouen, Le Havre, or Belgium and Germany, Amiens CCI offers the eco-village Jules Verne 2.

This is a set of 3,000 square meters of workshops and offices for foster the establishment of start-ups. To attract entrepreneurs into its territory, while respecting the existing environment, the ICC Amiens wanted an exemplary program for sustainable development: a friendly exterior landscaping and resource water, a building with thermal qualities (RT2012 - 20%), acoustic and natural lighting and exceptional carbon footprint

prime contractor, the architect Joel Letocart and office IngÅ©bois study have therefore opted for a construction system made entirely of wood, box made of ribbed CLT (cross laminated timber). These are the systems box ribbed CLT beech society LINEAZEN, implemented by companies LECAT and CMB, which were chosen. ICC Amiens, with the support of ADEME and the Regional Council of Picardy, chose the most viable solution, technically and economically. This construction system, its technicality allows high thermal optimization, structural, acoustic and aesthetic. The long-term savings are substantial.

In addition, the use of beech in this constructive system is innovative. This is a first in France Another advantage offered by the gasoline. Economic development of an entire sector. Beech is one of the most species of wood available on the national level and possesses great mechanical qualities. This approach has several major advantages as well: work short chain, enhance local woods underutilized and of course create jobs can not be outsourced .

Sustainable development approach of the project owner

ICC Amiens-Picardie is very committed to the creation and business creators. The eco village Jules Verne is both the symbol of the will and the tool to generate the creation of business in its environment. That is why the ICC Amiens has developed a mixed-office workshops, perfectly integrated in its environment, respectful of the landscape and water resources program. The vegetation of the site is essential: it directs the physical and functional organization of constructions. In order to make nice at work, place, industrial, hard and massive image was deliberately blurred to give way to an active and vibrant showcase for future activities. This village agency as a real village, with its solid containing activities and empty of light around an active core, which was planted wanted. The buildings are organized and oriented to this same spot, in the principle of "garden office". The presence of vegetated swales testify of alternative water management. The project is animated by a strong ambition to develop an exemplary construction, presenting a gray optimal energy balance, thermal efficiency level "RT2012 - 20%" and inexpensive maintenance. It is for this reason that the wood was chosen as structural building materials. To converge structural issues, thermal and acoustic, the laminated rib wooden box as a constructive mode that presents the best techno-economic balance. Constructive systems LINEAZEN, CLT beech, have presented the best performance incorporating 20cm insulators, presenting a beech finish and structural performance optimizing the thicknesses and volumes. Large openings promoting free energy, daylighting contributions and views of the gardens were able to be provided.

Architectural description

The pole Jules Verne at the crossroads of major thoroughfares, through Picard territory possesses a strategic location, between countryside and urban areas. It is the entrance gate of the city 'metropolis' of Amiens. Activities on this plateau, the vegetation is widely represented and became a symbol of the environment: between industry and kind. Hence the importance of working respectfully, its integration to the surrounding environment, so as to provide a pleasant image of activity between industrial dynamism and tranquility of the countryside setting. In simple architecture parallelepiped, occupants site buildings, possesses a refined volumetrie in an industrial spirit. The cells are identified by a set of horizontal assemblies boxes, organizing themselves along the D934. Workshops high volumes, s'agrémentent administrative offices, below, the first transplants volume. Different configurations are set up and boost the overall architecture. These volumes are interspersed with passages: vulnerabilities lights that create a visual link between all cells, whatever their orientation, has the image of a village. The cell layout is taking shape in a desire to minimize the mineralization site, and limit the linear feeder roads. The workshops are open to pierce the image of amusical score, which boosts the simple architecture of buildings, inducing a front moving. The bati is realized in a range of materials defined as "a true matter." In the metal cladding for workshops and panels in wood resin for administrative parts. One of the facades of a building shall be covered with a translucent polycarbonate cladding of a way to evoke the particular structure of the building: a voluntary presentation of this innovative process, an educational showcase of such realization.

Stakeholders

Stakeholders

Function : Contractor

CCI Amiens Picardie

Service communication - 6, boulevard de Belfort 80 039 Amiens cedex 1

<http://www.amiens-picardie.cci.fr>

Function : Designer

Joël Letocart architecte

Joël Letocart - joel.letocart@free.fr

Function : Structures calculist

Ingébois

Laurent Lepaul - ingebois@ingebois.com

<http://www.ingebois.com>

Function : Company

Entreprise Lecat

Dominique Lecat - entrepriselecat@orange.fr

Function : Manufacturer

Lineazen

Olivier Kracht - contact@lineazen.com

<http://www.lineazen.com>

Type of market

Design and implementation

Energy

Energy consumption

Primary energy need : 54,00 kWh/m².an

Primary energy need for standard building : 77,00 kWh/m².an

Calculation method : RT 2012

Envelope performance

Envelope U-Value : 0,29 W.m⁻².K⁻¹

Indicator : DIN 4108-7

Renewables & systems

Systems

Heating system :

- Gas boiler
- Aerotherm Heater

Hot water system :

- Individual electric boiler

Cooling system :

- No cooling system

Ventilation system :

- Natural ventilation
- Humidity sensitive Air Handling Unit (Hygro B)

Renewable systems :

- Solar photovoltaic

Renewable energy production : 5,00 %

Environment

Urban environment

Land plot area : 9 500,00 m²

Built-up area : 37,00 %

Green space : 4 500,00

The pole Jules Verne at the crossroads of major thoroughfares, through Picard territory possesses a strategic location, between countryside and urban areas. It is the entrance door "Town metropole" of Amiens. Activities on this plateau, the vegetation is widely represented and became a symbol of his environment between industry and kind. The site of the village PMI 2, along the pole Jules Verne, in the territory of the town of Boves, is framed by the A29 motorway and the D934. It is accessible from the street in the beautiful Orinoco and is widely visible from these areas: it becomes even, one of the first visible built land. Hence the importance of working respectfully, its integration in the environment that surrounds, way to make an image of activity between industrial dynamics framework pleasant and tranquility of the campaign. The pole Jules Verne 2 has been designed as a village, but an eco-village. The vegetation of the site is essential: it directs the physical and functional organization of constructions. In order to make nice at work, place, industrial, hard and massive image was deliberately blurred to give way to an active and vibrant showcase of future activities. This village PMI, along the D934, fits like a real village, with its full containing activities and devoid of light, around an active heart, which was planted wanted. The buildings are organized and oriented to this same spot, in the principle of "garden office". soil: the soil requires no external supply of aggregates. Surfaces will be treated with lime, gravel by in situ emulsion type. Roads: one finds heavy roads and mild. Funds will be realized as with natural products of local quarries. Finishing coats. Pedestrian paths: funds will be realized in the form of demolition materials recycled broken. Finishing concrete disables chippings Haute Marne. Parking: The funds will be realized in the form of demolition materials recycled broken. Finishing slabs perforated PVC configuration honeycomb filled with gravel of Haute Marne, promoting the infiltration of rainwater. Environmental management: The high proportion of green spaces and vegetations, limit setting implement complex system of stormwater treatment. A natural valley in southern parcel boundary, along the D934, recover a large part Stormwater site. This valley will be conducted with cusps. It will flow into an infiltration basin, located in lowest plot point with a capacity of 450 m³. Stormwater from the mineralized surfaces will be treated by separator hydrocarbons contemplated in the number 2 on the entire site, implemented during the first phase of the project. Valleys and infiltration ponds are a natural way feeders, plants Aquatic Plant and grasses.

Products

Product

Systems constructive wood XEN-X

Lineazen

contact@lineazen.com

<http://www.lineazen.com>

Product category : Gros œuvre / Structure, maçonnerie, façade

XEN-X is complete constructive system is solid wood panels large 3.2 x 12.2 m. LINEAZEN innovates by proposing CLT beech or bamboo. Both materials provide exceptional structural performance and great sound quality. LINEAZEN combines technology CLT that the structural box, used in facade walls or partition walls, floors, roofs. This innovation provides mechanical performance 40% superior to the usual techniques.

Constructive LINEAZEN systems allow to realize buildings of great height and push the technical and architectural possibilities of timber construction: height, volumes, door-to-false, long litters. They are optimized to respond with the best technical and economic balance the needs of a sustainable construction: structural, seismic, fire resistance, thermal, acoustic, sustainability. The LINEAZEN systems are prefabricated industrial manner, books on site by truck, and poses by the construction company. Three years of research and development, supported by the BPI Innovation, has been invested to develop this unique concept, protected by two patents. À LINEAZEN is adopts an industrial tool tip. The company also provides a national network of partners to 'PIECE high performance wood LINEAZEN solutions meet the needs of architects and facilitate the execution of projects.

The use of constructive systems XEN-X answers the essential desire of the project owner of a copy operation in matters of sustainable development: -An innovative and environmentally friendly materials: beech in the use of the constructive system is innovative. This is a first in France. Another advantage offered by this species: the economic development of an entire sector. The beech is one of the most species of wood available on the national level and possesses great mechanical qualities. This gait and presents several major interests: working short filiere, develop local sub-exploited and of course create the jobs can not be outsourced wood. -A building of quality to attract tenants: an aesthetic wood finish and warm comfort, low energy consumption in privileging the insulation of the building. Mastery of "PIECE is satisfied the choice of system constructive XEN-X, consisting of housing rib CLT (cross laminated timber). Architectural design is the aesthetic and modalities of implementation project that were decisive: speed, simplicity and reduced risk intemperie. This constructive system, for its technical expertise, allows high thermal optimization, structural, acoustic and aesthetic. The long-term savings are substantial.



Systèmes constructifs bois XEN-X

LINEAZEN

Olivier Kracht contact@lineazen.com

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XEN-X est un système constructif complet, constitué de panneaux de bois massifs de grandes dimensions 3,2 x 12,2 m. Lineazen innove en proposant du CLT de hêtre ou de bambou. Ces deux matériaux apportent une performance structurelle exceptionnelle et une grande qualité acoustique. Lineazen associe la technologie du CLT à celle du caisson structurel, utilisés en murs de façade ou refends, planchers, toitures. Cette innovation

offre des performances mécaniques 40% supérieures aux techniques usuelles. Les systèmes constructifs Lineazen permettent de réaliser des bâtiments de grande hauteur et repoussent les possibilités techniques et architecturales de la construction en bois : hauteur, volumes, porte-à-faux, longues portées. Ils sont optimisés pour répondre avec le meilleur équilibre technico-économique aux besoins d'une construction durable : structurel, sismique, résistance au feu, thermique, phonique, pérennité. Les systèmes XEN-X de Lineazen sont préfabriqués de manière industrielle, livrés sur chantier par camion, et posés par l'entreprise de construction. Trois ans de recherche et développement, soutenus par la BPI Innovation, ont été investis pour mettre au point ce concept unique, protégé par deux brevets. Lineazen est doté d'un outil industriel de pointe. L'entreprise a également constitué un réseau national de partenaires pour mettre en œuvre les solutions bois haute performance XEN-X, répondre aux besoins des architectes et faciliter l'exécution des chantiers.

Les systèmes XEN-X de Lineazen ont répondu aux attentes de la maîtrise d'ouvrage, comme élément clé d'une opération exemplaire et innovante en matière de construction durable : -un système constructif innovant, puisqu'il s'agit d'une première : le CLT de hêtre-un matériaux hêtre utilisé en construction représente l'opportunité de développer une filière industrielle innovante, à forte valeur ajoutée et créatrice d'emplois-un bâtiment performant et peu consommateur d'énergie primaire : plus de 20% plus performant que le niveau réglementaire en privilégiant les systèmes passifs plutôt que les systèmes techniques. -un bâtiment sain et confortable, grâce à des parois chaleureuses en bois massif, des matériaux permettant de préserver la qualité de l'air intérieur Les systèmes XEN-X de Lineazen ont répondu aux attentes de la maîtrise d'œuvre sur le plan architectural et technique : -sur le plan architectural, c'est l'esthétique et la mise en œuvre chantier qui ont particulièrement retenu l'attention de l'architecte : rapidité, modularité, et diminuant le risque lié aux intempéries-sur le plan technique : la performance technique et acoustique du système ont apporté satisfaction au bureau d'étude, qui a pu dimensionner les systèmes en fonction du structurel et de la thermique et optimiser les espaces occupés.



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Contest



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