CASE STUDY: LEED CERTIFICATION
LEED CASE STUDY: Information Sheet

- PROJECT NAME: AMPO Machining Workshop in Idiazabal
- PROJECT LOCATION: Idiazabal, Gipuzkoa, Spain

LEED FACTS:

- Rating System: LEED-BD+C: NC v2009
- Certification Date: (To be filled once certification process ends)
- Certification Level and Points Achieved/Available: (To be filled once certification process ends)
- SS Points Achieved/Available: (To be filled once certification process ends)
- WE Points Achieved/Available: (To be filled once certification process ends)
- EA Points Achieved/Available: (To be filled once certification process ends)
- MR Points Achieved/Available: (To be filled once certification process ends)
- IEQ Points Achieved/Available: (To be filled once certification process ends)
- ID Points Achieved/Available: (To be filled once certification process ends)
SUMMARIES:

PROJECT BACKGROUND:
The Planta de Mecanizado AMPO in Idiazabal is a new construction Manufacturing Plant built in Idiazabal, in Gipuzkoa, Spain. The LEED-BD+C: NC v2009 has been used as grading system to score the sustainable measures applicable to obtain the corresponding LEED Certification. The building area is 138,093.5 sq. ft. with a total regular occupancy of 96 (FTE=256), while it is expected that a maximum of 10 additional transient visitors may be found in the building.

STRATEGIES AND RESULTS:
In order to obtain the corresponding LEED certification, different Sustainable and Energy Efficient features have been introduced. Some of the most innovative aspects introduced involve Water and energy use reducing measures, such as:

- SUSTAINABLE LANDSCAPING: All of the Landscaping has been designed keeping in mind water efficiency parameters, and as such, plants requiring no irrigation have been introduced, eliminating the need of water for irrigation.

- REDUCED HEAT ISLAND EFFECT: Through the use of white TPO sheets and green roof all along the roof and sections of the exterior decking of the facility, the Heat Island Effect is considerably minimized, reducing the energy usage for cooling.

- WATER USE REDUCTION: All water fixtures installed in the building are low water consumption. This gives a 49.16% reduction in potable water use in all fixtures.

- LED LIGHTING: The entire facility will use LED technology for interior as well as exterior lighting, in order to reduce energy demand.
• DAYLIGHT: Daylight is provided through the skylights and the aerogel panels installed in the façade.

• ESTIMATED ENERGY SAVINGS: The simulations carried out, estimate that energy savings of up to **16.11% in Energy costs.**

• ON-SITE RENEWABLE ENERGIES: Photovoltaic panels have been installed in order to produce electricity on-site.

In addition to the Energy and Water Efficiency measures used, the designed team has also kept in mind the sustainability aspect of construction phase, by selecting Regional materials, as well as materials with high-recycled content.

**QUOTES**

Aitor Montoya, Machining Plant Director

“The new plant, besides taking into account environmental aspects and being more sustainable, will help us improve also our working conditions”

Nagore Arberas, Environmental Manager

“AMPO has maintained a determined and economically backed commitment to minimise environmental impacts of our activity as much as possible, and with the new plant we have taken a step forward: we have demonstrate our firm commitment with sustainable construction.”

Xabier Iturrioz, Maintenance Director

“With the new Sustainable and Energy Efficient features we will do our part to help reducing heat island effect, which is really important nowadays”.
BASIC PROJECT INFORMATION

Architect, Engineer and Landscape: LKS Ingenieria S.Coop.
Commissioning Agent: Fillpack LEED
Consultant: LKS Ingenieria S. Coop
Owner: AMPO, S.COOP
Project Size: 138,093.5 sq ft
Photography Courtesy of: LKS Ingenieria S.Coop.
ECOSISTEMA
AGUA

2050 eKosYstem
FOTOSÍNTESIS
DÍAS CICLOS ESTACIONES
CONFORT
GRADO DE CONFORT ÓPTIMO:
(CLIMATIZACION = VENTILACION + CALEFACCION + REFRIGERACION)

SIMULACION ENERGETICA
HERRAMIENTA DE ANALISIS DINAMICO

CONFORT
✓ Ligero
✓ Aislante
✓ Difusor de luz
✓ Duradero
✓ Cradle to cradle

NIEBLA
2050 eKosYstem

BOSQUE
MATERIALES INNOVADORES

Geosilex C=2 & Geosilex NOx

**Geosilex CO2** es un Aditivo foto catalítico que se añade a hormigón o pavimentos pétreos.

Contiene nano-portlandita pura; que reacciona con el CO2, fijándolo

\[ \text{Ca(OH)}_2 (s) + \text{CO}_2 (g) \rightarrow \text{CaCO}_3 (s) + \text{H}_2 \text{O(aq)} \]

1M2 DE PAVIMENTO CON GCO2 FIJA 1 KG DE CO2

Origen 100% reciclado aprovechando residuos de proceso industrial.

**Geosilex NOX** contiene TiO2, que reacciona en presencia de luz solar

Capturando NOX, responsable de la lluvia ácida

Tiene un efecto biocida y autolimpiantes en la superficie que se aplica.

1M2 DE PAVIMENTO CON GNOX FIJA 26.75 mg /día

SUELO
COMPROMISO
IMÁGENES