WOOD2GOOD

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WASTE RECOVERY

Espana

With financial support from the EU

In partnership with:

Introduction (Photo + Copyright!)

minimum 72 DPI for the web
minimum 300 DPI for impression (Innobox Book!)

Xxxxxxx

Optimizing energy efficiency by using waste wood shavings in a boiler to generate heat for the factory and the furnaces during polishing.

- **Country**

X Spain
☐ Italy
☐ France
☐ Belgium
☐ UK
☐ Hungary
☐ Other

Company´s Description:

MICUNA, S.L.
In 1973 birth of a new icon in the world of children. MICUNA Group was founded in 1973, located in the town of chair. Its main activity was the manufacture of wooden cribs. During 30 years of its existence has been a trendsetter in the baby furniture industry to bring to market wood cribs, when they were metal cots that dominated the market at the time.
In 1981 it consolidates a leader, and moved its facilities to Sollana, Valencia (Spain), next to the Albufera Natural Park. Now, a total of 35.000 m2, continues with making baby furniture that gave name to its origins, expanding its business with logistics, polishes, melamine manufacturing and management.
National market leader, and currently the fourth leading European company in the manufacture of cribs and furniture for children, is recognized as a company of high quality and safety in their products
MICUNA carries on business at any time contemplating his mission: the child protection. In line with this mission, in MICUNA have very important note values: solidarity, fair competition, safety and welfare of workers, respect for the environment, supporting mothers and working women, quality, safety and respect for the rights of children.

Sub-sectors affected:

- ☐ Sawed and sanded (A 1st Wood processing)
- ☐ Sheets manufacture (1st Wood processing)
- ☐ Board Manufacturing (1st Wood processing)
- ☐ Industrial preparation (1st Wood processing)
- ☐ Packings and packaging (2nd Transformation)
- X Furniture (2nd Transformation)
- ☐ Carpentry (2nd Transformation)
- ☐ Trim and moldings (2nd Transformation)
- ☐ Wood and furniture sector in general
- ☐ Others

Costs	**156.000,00 €**
(and/or investment,return on investment, employment indicator…):	BOILER + HEAT EXCHANGER + PIPES AND SUPPLIES TO VARIOUS PLANTS AND OVENS Return on investment is estimated to be 12 years.

Implementation Process:

The company is considering adopting this approach in order to reduce energy consumption, to protect the environment, to ensure supply and to promote sustainable behaviour.

The energy "need" of a company depends on its size, its characteristics and its existing technology. With all of that in mind the company is considering a viable energy improvement, bearing in mind the period to recoup the investment and the firm's technological limitations.

The steps undertaken by the company to achieve these goals were:

1. Definition of the investment project.
2. Undertaking technical analysis.
3. Definition and quantification of economic variables.
4. Selecting the supplier.
5. Installing the boiler.
6. Installing the heat exchanger.
7. Facilities for the different installation plants and ovens.
8. Control and monitoring of the project.

Currently the company is in the final stage of controlling and monitoring the project, and therefore heat has already become available for the furnaces and factories.

Initiated practices:

The company is targeting board waste and the left-overs from cut sections and mechanically treated wood which are not to be used for its own use or to be sold as a secondary raw material and which can be harnessed to produce energy through incineration. In this way the company will use the sawdust produced from the manufacturing process, to ensure it has a harmless effect on the environment, since it will have no impact on CO2 emissions, and at nil cost allowing significant savings compared to other fossil fuels.

The company will therefore recover some of the by-products that are created in the manufacture of its products: sawdust, wood chips, wood blocks, etc. Up till now this waste was collected by different companies which then turned them into pallets; there is also significant demand from countries of northern Europe for the waste as an alternative fuel to diesel, natural gas or propane.

A first step in this process is to collect the sawdust and wood debris which generally are scattered about and mixed up with other waste. Selection at this point should be avoided because it increases the cost of collection. The company had to create different and new points of storage depending on the type of wood waste: containers, silos, stacks, etc.

Once the collection points are full, the waste is transported to the treatment centre where it is subjected to the processes of sorting, cleaning and volume reduction.

Results:

The company has reduced energy costs and consequently it has improved production costs making its products more competitive.

It has also reduced the chip waste generated and has obtained a better working environment by providing the factories with heating in winter and has reduced the risk of disease associated with sawdust and wood dust.

It has also reduced the fire risk as a result of eliminating flammable waste.

Recommendations:

The sustainable management of energy, the promotion of energy efficiency and the increased use of renewable energies are today a necessity.

The recovery of waste increases environmental awareness in society and its satisfaction too as waste is properly managed.

It is necessary to recover waste in order to better use natural resources and to pay greater respect to the environment. Ultimately, sustainability is about the rational use of natural resources by ensuring their availability for future generations.

As wood is a bulky type of waste, its recovery minimizes the use of landfills, and leads it to becoming a renewable energy source, making it a very attractive material when compared to the progressive depletion of fossil fuels like oil.

Conclusions:

There are different objectives that can be achieved with the implementation of energy efficiency measures:

- Greater respect and better preservation of the environment, because no more energy than is necessary is consumed and CO2 emissions are reduced, representing a contribution to the improvement of global warming and improving the image of the company by contributing to the social good.
- Optimization of energy consumption in the company, which implies lower costs and greater competitiveness.
- Lower dependency and greater security in the warehousing of supplies (oil, gas, etc.).

In short, the idea is to minimize the environmental impact of waste products plus their economic costs and to develop new outlets for them.

More information :

Keywords:

- X Energy
- ☐ Cascade use of wood
- ☐ Forest
- ☐ Footprint/blueprint
- X Recycling
- ☐ Training
- ☐ LEAN methodology
- ☐ Processes
- ☐ Construction
- ☐ Cost benefits
- ☐ Marketing

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