BurntWood ReWood

Facade cladding made of recycled wood

CO_2 storage in construction

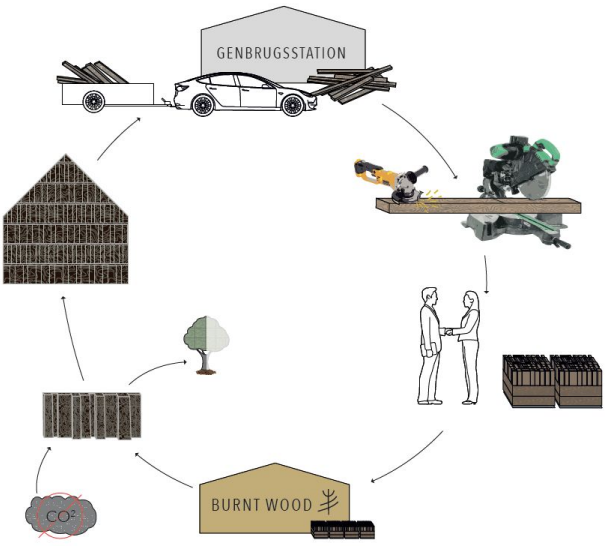
Too much CO_2 is emitted and excess carbon in the atmosphere warms the planet. One solution to this in construction is CO_2 storage. All plants absorb CO_2, during photosynthesis. One kg of wood contains approximately a kg of CO_2. The more tons of plant-based building materials, such as wood, hemp, straw, etc., we can store in construction, the less is emitted to the atmosphere, meaning the environment stores and is “spared” that CO_2 emission.

When incinerating wood, the CO_2 stored internally in the wood is emitted back into the atmosphere, resetting the CO_2 score. BurntWood offers an opportunity of getting further use out of previously used wood elements, resulting in no need for new production of other building materials, respectively preventing the logging of further logs.
Thus, focusing on plant-based building materials as well as recycling in the construction industry. BurntWood ReWood saves approximately 30 kg CO_2 per m^2. Furthermore, for every m^2 sold, a tree is planted through the Growing Trees Network, making Burnt Wood ReWood a win-win material.

New method for inexhaustible source of recycled wood

In the construction industry, there is a lot of talk about sustainability, recycling and life cycle, but in reality it is difficult to recycle wood from a recycling station, as it has different dimensions and colors and requires a lot of handling before it is a finished product. It is much easier to recycle wood that has been carefully peeled down by a demolition company. Unfortunately, there is rarely enough material for a new project.

We have found a solution where we have an inexhaustible source of recycled wood because the different dimensions, lengths and colors are not an issue to production, but instead they contribute to the finished architectural expression. The different dimensions of the recycled wood are put together in facade cladding, turning it into a living architectural structure. The elements can be made of pieces of wood all the way down to 65 cm in length. We use wood that is between 19 mm to 100 mm in thickness and widths from 30 mm to 400 mm. That is, we can utilize the bulk of the wood that is delivered to the recycling station.



Process in practice

The recycling site has provided a container with a banner and a video that explains what the wood is to be used for, as well as what sizes and lengths can be put in the container. This means that we get a reduction in our workflow with the help from citizens making the initial sorting.

Next, we have created workstations that do not require specific qualifications to operate. The first is to clean the wood of nails with an angle grinder.

After the wood has been cleaned, it is cut into 65 cm pieces. The pieces are then packed and shipped to the Burntwood factory, where the pieces are assembled into claddings. Here we make an effort to turn the core outwards in order to optimize the durability as much as possible. Then they are processed through the machine, where they are burned "well done", so we are sure of a homogenous color and excellent durability. Thus, the elements of recycled wood get the same properties as new burnt wood.

When wood is burned, sugar and the water growth rings withhold, is removed. This means that microorganisms cannot inhabit the face, as it cannot absorb water. This technique has been known since the Viking Age, and is still used in Japan to this day. We have refined it by giving it a primer, resulting in the wood not staining. We have subjected our product to an aging test at the Danish Technological Institute and the wood retains its class 2 certification, even after being burned.

Products by BurntWood are estimated to last between 50 and 80 years without further maintenance, but it will of course patinate and pale over the years.

After the elements are burned and primed, they are ready for assembly.

Why Burntwood ReUse?

- Maintenance-free facade
- Recycled wood = CO2-plus storage 30kg/m2
- Trees planted per 2. sold element = Win-Win in CO2 the accounts
- Toxin-free impregnation
- Modern look
- CSR jobs
- Quick assembly
- From the local recycling to, for instance, the local school

Read more at:

www.burntwood.dk
https://bygtek.dk/artikel/facader/brndt-tr-kan-blive-et-genbrugshit http://www.e-pages.dk/odsgard/723/html5 **p. 10 & 11**