



Pallet valorisation system for energy purposes

Many companies, on the one hand, use single-use pallets in their operation and secondly consume heat in their processes. Heizomat has developed a system aiming to take advantage of this specific case by designing a system that allows the company to valorise the single-use pallets to produce heat. The system includes a chipper, a storage silo to store the chips and a boiler to burn them, all integrated in a container. Since the system operates in continuous mode, the storage silo volume is reduced which allows to fit it in a container.

This system can greatly contribute to decrease the energy cost of the company (by means of valorising 13 pallets it allows to substitute 100 litres of diesel), significantly reduce the storage area required otherwise for the non-reusable pallets and avoid the cost associated to the transport of the pallets to the disposal or treatment point, which in turn also implies to avoid the GHG emissions associated to this transport. Therefore, it contributes to the climate change mitigation and the circular economy promotion.

The 100-kW system can produce around 250 000 kWh of heat per year (equivalent to 25 000 litres of diesel which would imply around 20 000 €/year depending on the cost of the diesel, which is following an upward trend). Considering a conservative scenario, the payback time would be around 5 years (for the 200-kW boiler the payback time will be significantly reduced). Additional savings are reached taking into account the avoidance of treatment or disposal cost of the single-use pallets or the sale of certificates for the avoided CO₂ emissions.



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ADDITIONAL INFORMATION

Regarding the operation of the pallet valorisation system, an operator will need to feed the pallet into the chipper located in one of the ends of the container instead of piling it to the pallets storage area.

Pallets are chipped and in parallel, most metals (nails) are separated. The clean chips are then stored in a silo located inside the container. From there, the chips are fed into the boiler without intervention of any operator to produce hot water.



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ABOUT BRANCHES

BRANCHES is a H2020 “Coordination Support Action” project, that brings together 12 partners from 5 different countries. The overall objective of **BRANCHES** is to foster knowledge transfer and innovation in rural areas (agriculture and forestry), enhancing the viability and competitiveness of biomass supply chains and promoting innovative technologies, rural bioeconomy solutions and sustainable agricultural and forest management.



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