

Therminol empowers sustainable waste-conversion technology

Eastman helps Bioforcetech get next-generation biodryer operational.

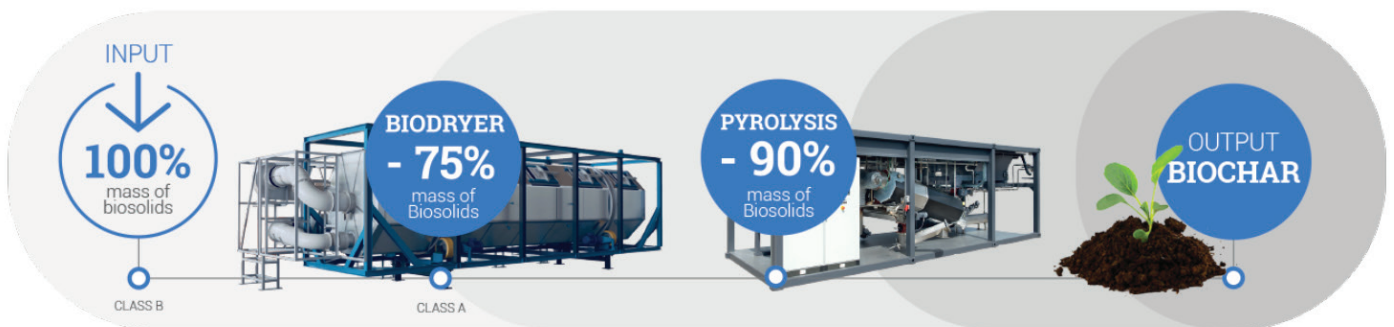
Situation

Bioforcetech Corp. specializes in converting biosolids, industrial sludge and food waste into usable, sustainable products. The sustainable Bioforcetech process transforms these materials into OurCarbon® Biochar, a carbon-rich material which can be used in industries such as printing and construction. This innovative approach helps divert waste destined for landfills and creates valuable products.

The process transforms a mass of biosolids in the company's BioDryer. Biodrying combined with pyrolysis converts waste feedstock into energy and biochar.

Analysis

The equipment used to create biochar requires a heat transfer fluid (HTF) specifically formulated to work in a closed circuit for many years and to withstand high temperatures while maintaining excellent thermal stability and heat exchange properties. The temperatures for waste heat recovery from this kind of process are high, making synthetic HTFs the best option.



Solution

Eastman technical experts were on hand for consultation, education and support throughout design and engineering phases. This included conducting engineering seminars and P&IDs reviews. This let everyone involved become familiar with best practices in safety and maintenance of HTF systems.

Eastman Therminol® 66 HTF was selected for Bioforcetech's process. Therminol 66 is the world's most popular high-temperature, liquid-phase HTF because of its capability to perform at high temperatures for decades. It was chosen for the possibility of having an efficient, compact, low-pressure heat exchange system. The high thermal stability of Therminol 66 guarantees considerable resistance to the increase of viscosity and to oxidation, allowing stable operation with minimized costs of unexpected maintenance.

With the help of Therminol, Bioforcetech completed the first industrial application of its biochar production process in the fourth quarter of 2023. The process is now under patent approval. Therminol and the Eastman HTF team helped fuel Bioforcetech's mission to reduce the burden of organic waste, contribute to a healthier planet and create a more circular economy.

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