

Thermocatalytic Depolymerization Unit Details

Overall Description:

Designed to employ a thermo-catalytic depolymerization/cracking process to break down long chain hydrocarbons and/or organic materials into smaller molecules. These molecular fragments are useful feedstocks that can be further refined into fuel or chemical precursors. The unit is designed to use lignocellulosic solid feed (weathered rail ties and wood waste from sawmills) along with either petroleum-based (used motor oil) or biologic-based carrier fluid (seed oil) as carrier fluids. It is new and has been installed and connected to the operational room and tested using water. This plant is 100% operational and has all the drawings, control narrative and all back-up documents. A total of \$7.5M Cdn has been invested into this unit.

Potential Alternate Applications:

The unit can be re-purposed/retrofitted to serve other processes such as:

- Chemical reclaiming, regeneration, or, purification (for example, amines used in gas sweetening, glycols used in gas dehydration, lubrication oil).
- Zero liquid discharge water purification via evaporation and crystallization/solids discharge.
- Slop/off-spec oil treatment.
- Essential/plant oil extraction.
- Natural gas sweetening or dehydration.
- Biomass or waste pyrolysis/hydrothermal liquefaction.
- Contaminated soil or solids remediation.
- Slurry metal extraction/leaching.
- Plastics recycling, remelter and reclaimer to separate out solids from waste thermoplastics or for a pyrolysis processing
- Medical/bio-hazardous waste treatment/recycling.
- Sulphur de-gassing and/or remelting.