



simagroinc

Clean Pulp and Energy Platforms

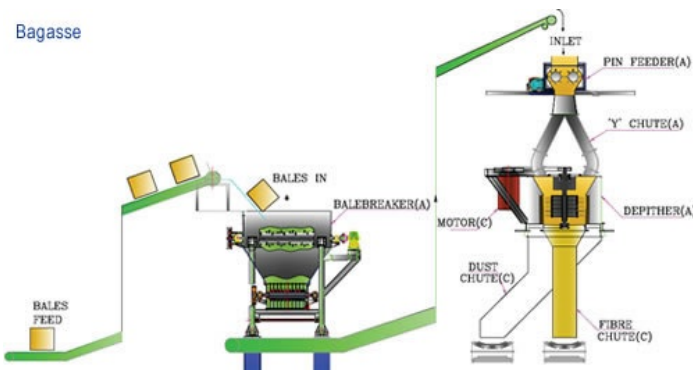
Pulping | Engineering Services | Biofuels | Biochemicals

Agro Pulping was established in 1991 as a fabrication unit, with a focus on making pulp and paper from agricultural waste like sugarcane bagasse. From a single product offering – depithers, Agro has now grown into a global supplier of a wide range of equipment and systems for making Clean Pulp. In 2010, Agro made the strategic move of becoming a turnkey provider of pulping systems - from engineering, equipment and electrical to civil, instrumentation and erection. This strategic shift resulted in the execution of four turnkey projects in India as well as the establishment of Sim Agro Inc. in the US.

Together, Agro and Sim Agro Inc. have been actively working on projects in non-wood pulping, bioenergy and biofuels space, with several global projects executed across Colombia, South America, Kenya and Canada. Currently, several new projects are underway in the United States as the demand for non-wood pulp is increasingly sought by consumer product (tissue, towel, molded tableware) companies.

70

Bagasse

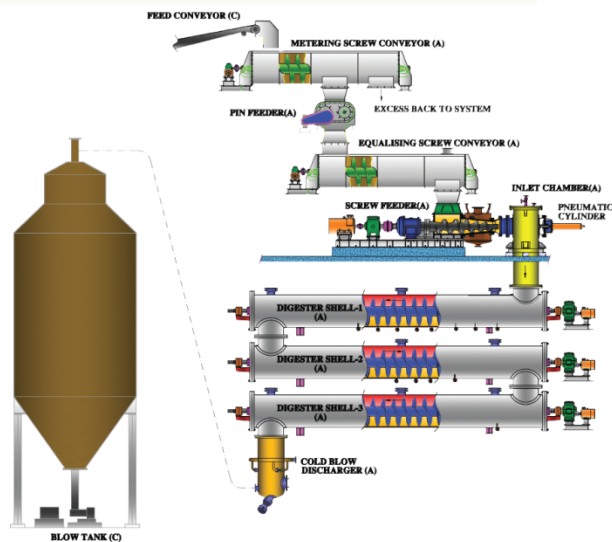
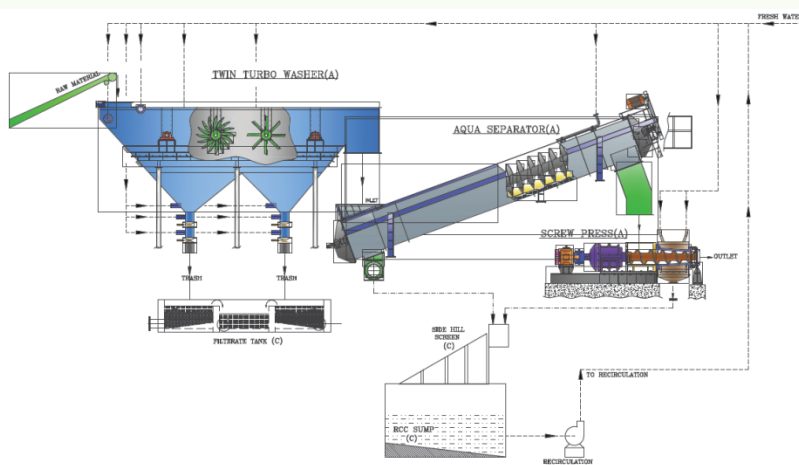


Fiber Preparation System

- Removes pith and silica by 70-80%.
- Handles loose fiber as well as bales.
- Suitable for different non-wood fibers like bagasse and wheat / rice straw.
- Low maintenance and low power usage.
- Unique proprietary design that is constantly updated.

Wet Washing System

- Removes pith and silica by 70-80%.
- Dissolves chlorides & soluble chemicals.
- Eliminates pith, nodes and fines.
- Reduces steam, cooking and bleaching chemicals by 15-25% .

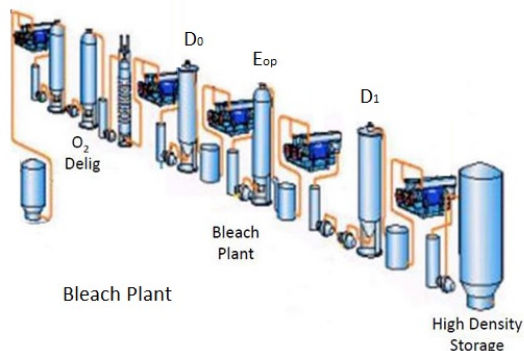
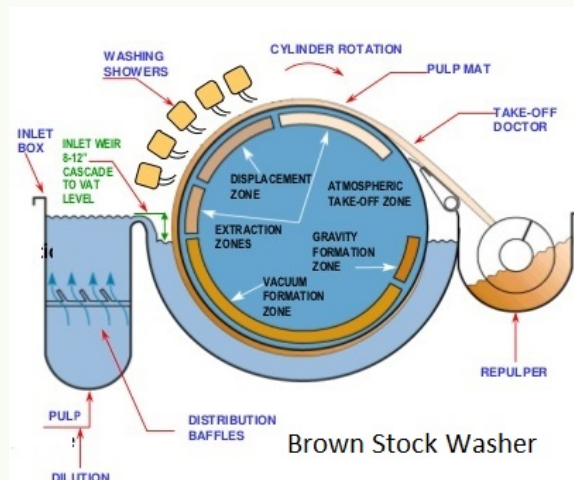


Continuous Digester System

- Handles wide range of raw materials like Bagasse, Wheat / Rice straw in a continuous stream.
- Reduces steam consumption by 15-20%.
- Vapor phase cooking reduces chemicals by 15-25%.
- Guarantees uniform pulp to enhance paper machine runnability.

Brown Stock Washing & Screening

- Designed to handle non-wood pulp.
- Ensures high removal of soda and black liquor solids.
- Inexpensive to operate and easy to maintain.
- High quality pulp devoid of soda.
- Soda loss less than 2%.

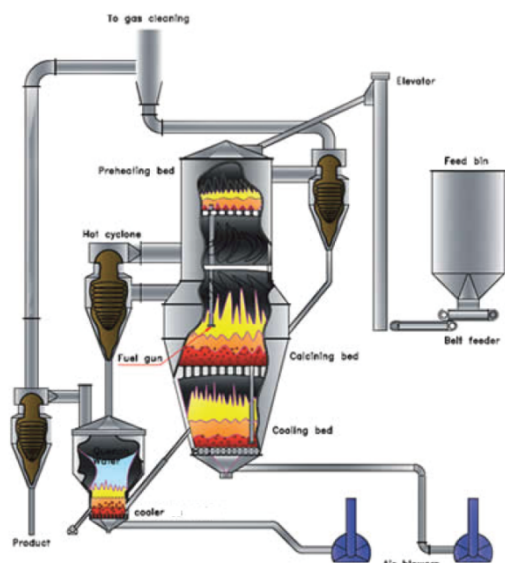
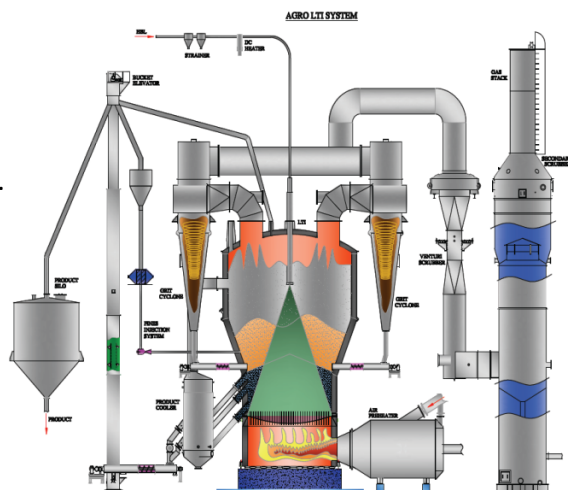


Oxygen Delignification & Bleaching

- Pulp can be bleached up to ISO brightness of 88-90.
- Oxygen Delignification reduces the use of bleaching chemicals.
- ECF – elemental chlorine free bleaching or Total Chlorine Free (TCF) bleaching.
- Flexible Chlorine Dioxide plant.

Low Temp Incinerator & Evaporators

- Designed to handle low concentration, high silica black liquor.
- High thermal efficiency.
- Scaling & viscosity problems do not impact the process.
- 92 – 95% soda recovery in the form of soda ash pellets.
- Safe process as there is no smelt formation.

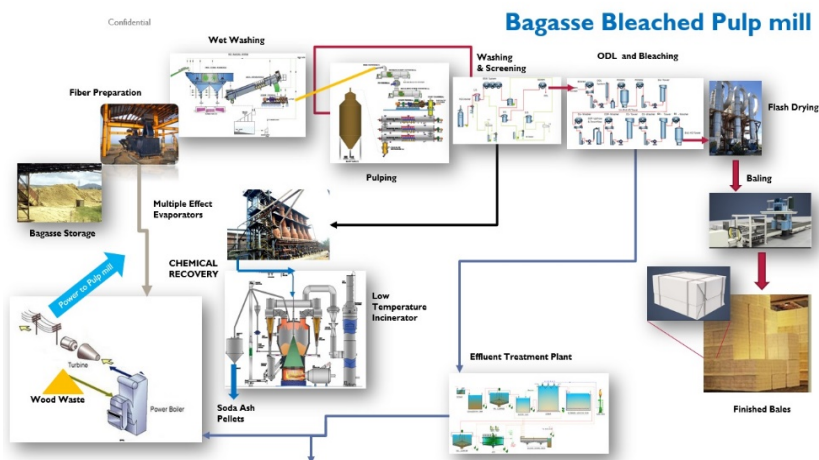


Recaustizing & Lime Calciner

- Converts soda ash into white liquor, recovering over 90% of cooking chemicals.
- Small footprint due to vertical installation.
- 30-50% cheaper than lime kiln with higher efficiency.
- Few moving parts – no ring formation or operational issues with chains.
- Multi-fuel burner system – Furnace Oil, low ash coals, PetCoke and other fuels.
- Final lime in pellet form with high purity.
- Capacities range from 30 TPD to 500 TPD of lime.

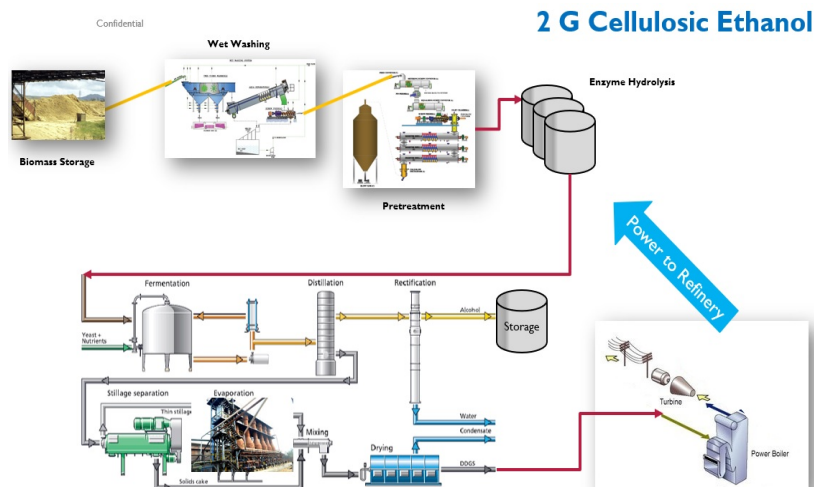
Complete Pulp Mill with Drying, Power & ETP

- Complete solutions for pulp mills, including drying and baling the pulp for sale.
- Ability to handle several feedstocks from bagasse, wheat straw, industrial hemp, kenaf, miscanthus or any non-wood material that contains cellulose.
- Integrated Power Plant to make the plant self-sufficient for steam and power and export the excess to the grid.
- Effluent Treatment Plant recycles at least 30% of the water and can be designed to recycle as much as 75%.



Biofuels & Biochemicals

- Systems designed to be used in 2 G Cellulosic Ethanol.
- Commercial systems that can handle up to 500 TPD of fiber to pretreat for ethanol and other biochemical production.
- Lignin extraction from the black or spent liquor.
- Biodiesel and Nutrient Extraction Plants also available.



Engineering Services

- Pre-investment studies.
- Environmental impact assessment / studies.
- Detailed project reports including cost estimates.
- Engineering & design.
- Procurement assistance.
- Training and assistance in personnel selection.
- Engineering application software development.
- Erection & commissioning services.

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