ECOSURE™
PULPMOLDING

INTELLIFIB™

FIBER STOCK PREPARATION SYSTEM

CONTENTS HIGHLIGHTS

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INTRODUCTION

The Intelligent Fiber Stock Preparation System, also known as the Bought-Out Pulp System, is a state-of-the-art solution designed to process pulp sheets or bales into a uniform pulp slurry. Engineered to maintain a stable pulp consistency of 0.3%, it is ideal for supporting downstream operations like biodegradable tableware and packaging production.

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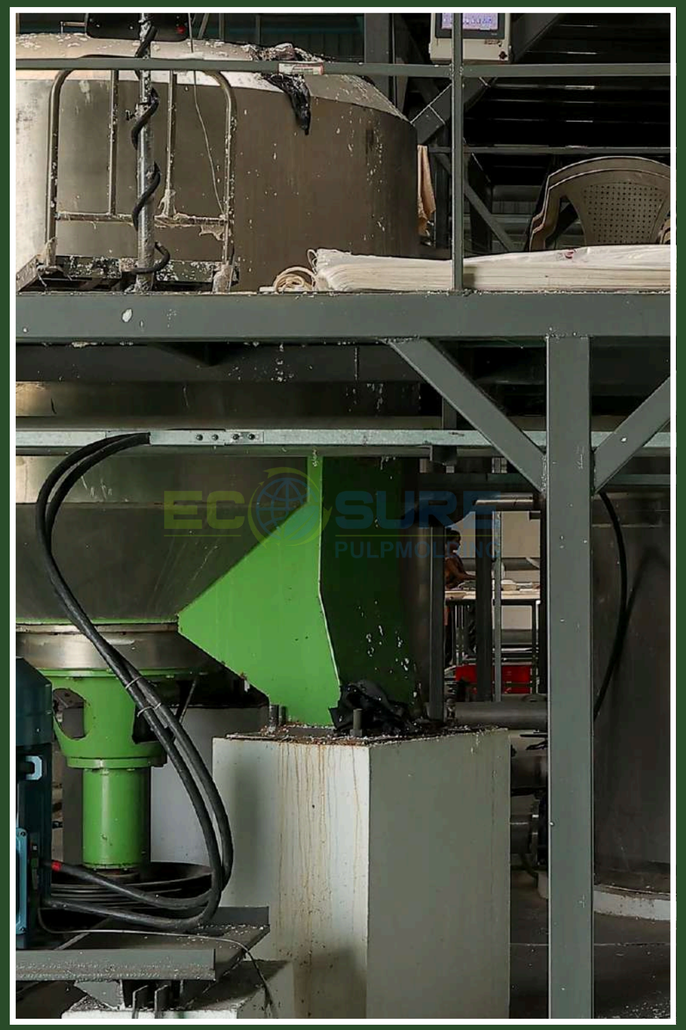

KEY FEATURES OF THE INTELLIFIB™ PULPMILL

1. Efficient Pulp Processing

- Utilizes pulp sheets or bales mixed with water in a pulper to create a homogeneous pulp slurry.
- Refiners ensure uniform fiber treatment, enhancing pulp properties and quality.

2. Advanced Pulp Storage and Preparation

- Storage Tanks: Safeguard pulp slurry with optimal mixing capabilities.
- Preparation Tanks: Includes chemical dosing units for customized pulp treatment.

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3. Precision Control for Consistency

- Maintains pulp consistency at 0.3%, ensuring seamless feeding into machines.
- Incorporates high-accuracy sensors and automated controls.

4. Comprehensive System Integration

- Vacuum System: Efficiently removes excess air, improving pulp quality.
- Air Compressor System: Ensures adequate pneumatic support for operations.
- Pulp Pumps and Water Pumps: Reliable transfer of materials throughout the system.

5. Water Management

- Includes water tanks and advanced recycling systems for sustainable water usage.
- Reduces water waste while ensuring uninterrupted operation.

Pulp Pump

Tri Disc Refiner

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INTELLIFIB KEY POINTS

1. Plant Capacity
2. Pulper Capacity
3. Forming Capacity
4. Forming Machine Type
5. Machine Model
6. Platen Size
7. No. of Forming M/C
8. M/C Design Capacity
9. Trimming Machine
10. No. of Trimming M/C

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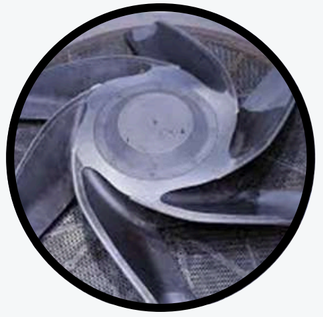
PULPER: CONVEYOR &PULPER (BLADE AND MESH)

PULPER: CONVEYOR

Conveyor: MS Structure with SS-304 Side, with load cell, synchronised with PLC for fully Automation.

PULPER (BLADE AND MESH)

- Scope of Supply and Material of Construction: Impeller: AISI-304 Integral Completely Casted Machined & balanced.
- Screen Plate: AISI-304 Screen Plate perforated duly machined.
- Pulper Tub with Support: Tub is fabricated with SS-304, completely welded and smooth finished SS supports for RCC pedestals, Nozzle for Stock Discharge, baffles inside the tub for better agitation. Three lugs with hole welded to the tub for lifting the assembly



Blade

Mesh

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PULPER (REFINER-TDR-17”)

EPTL TDR is Improving the Slurry Beating Degree Further to Produce Fine Pulp For Agro Fiber Molding Production Line. The Abrasion Section Contains Two Stationary Serrated Discs on Either Side of a Rotating Disc. Sturdy, Latest Mechanism, Compact, and Most Important the Refiner Plates bar Designs to Specific Application in Fiber Molding Industry. TDR is the Result of concentrate Precision Making this Machine exclusive in the Agro Fiber Molding Production Line.

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PULPER OPERATING DATA

Furnish	Bagasse sheet pulp
Mode of Operation	Continuous
Volume	Lit 2000/3000
Tub Volume	Lit 2100/3100
Operating Consistency	% 5.0 - 6.0
Consumed Power	kw 25
Motor Rating	kw/rpm 30/980 :37/ 980
Screen perforation	mm 10
Drive Belt	type “V”

CHEMICAL DOSING

Chemical Dosing:

- **Alkyl ketene dimer (AKD):**
  - All sugarcane bagasse pulp tableware products must be waterproofed.
  - For waterproofing, mix waterproof additives (AKD) at approximately 1.4% of the pulp quantity.
  - Application: These tableware products are mostly used for serving fruit chaat, dry food products, etc.
- **Oil and grease resistance (OGR):**
  - For tableware products that will be used with heated and oily foods, oil-proof additives must be mixed.
  - Use oil-proof additives (FP200) at approximately 1.7% of the pulp quantity.
  - Application: These tableware products are mostly used for serving hot food, liquids, etc.

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LOW CONSISTENCY CLEANER

Based on decades of experience in pulp molding machine production and pulp stock preparation, Voith developed its LC Cleaner product line. Our customers profit from proven Voith quality in stock preparation and simultaneously lower costs of raw materials. Our LC cleaner products are perfectly matched to each other.

Take advantage of our technologies for outstanding pulp product quality. Low consistency (LC) cleaners are used to remove small contaminants from pulp slurry during the production process.

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HOT MOLD RETURN WATER TANK

Hot Mold Return Water Tank: During the Hot Press most of water go vaporise and some quantity of water after vapour condensate come out through Bottom mold hole. This water accumulate in a tank and reuse after treatment. Tank Size- 2x2x2.5 mtr³

VACUUM PUMP

Our vacuum pump's main function is to change the pressure in a contained space to create a full or partial vacuum mechanically. Pressure will always try to equalize across connected regions as gas molecules flow from high to low to fill the entire area of that volume.

Therefore, if a new low-pressure space is introduced, gas will naturally flow from the high-pressure area to the new area of low-pressure until they are of equal pressure. Notice this vacuum process is created not by "sucking" gases but by pushing molecules. Vacuum pumps essentially move gas molecules from one region to the next to create a vacuum by changing high and low-pressure states.

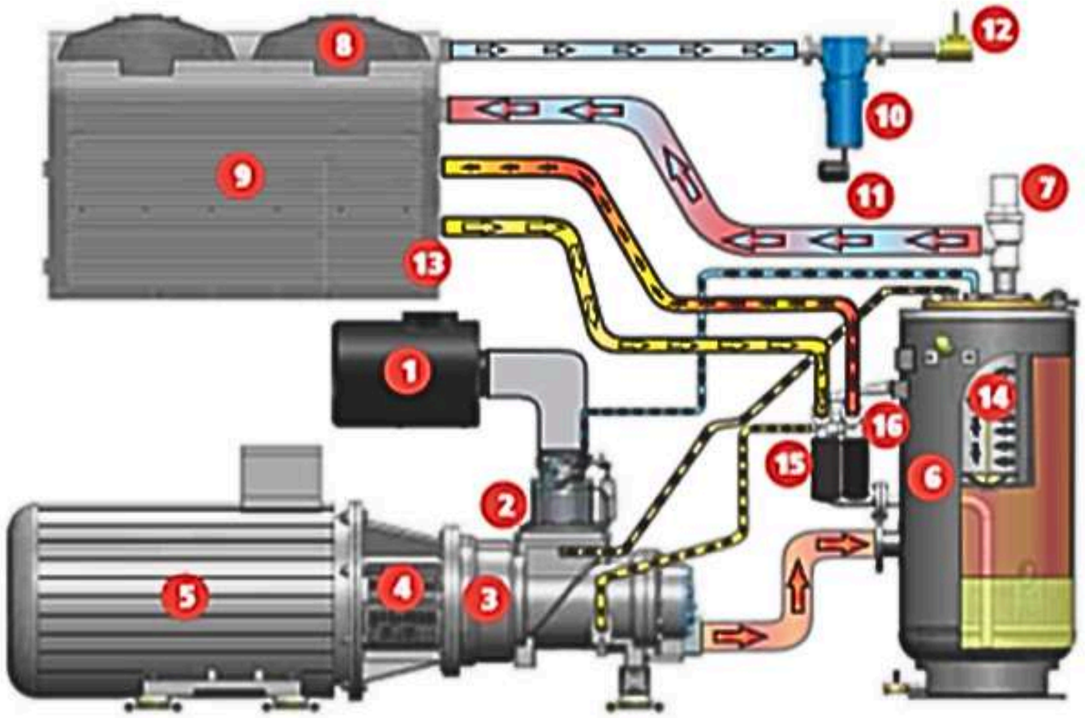
COOLING TOWER

Cooling Process Water: The cooling tower is used to lower the temperature of hot water generated during various stages of bagasse processing, such as pulping, washing, or bleaching. This ensures that the machinery and processes operate within safe temperature ranges.

Consistent Processing Conditions: Proper cooling ensures that the bagasse pulp or other products are processed under consistent conditions, which is critical for maintaining product quality and uniformity

AIR COMPRESSOR WITH DRYER

Air/Oil Flow Diagram



1 . Air Intake Filter
2. Suction Control Valve
3. Airend
4. Drive Coupling
5. Electric Motor
6. Air-Oil Separator Tank
7. Minimum Pressure Valve
8. Cooling Fan
9. After Cooler
10. Moisture Separator
11. Automatic Drain
12. Outlet Valve
13. Oil Cooler
14. Air-Oil Separator
15. Oil Filter (spin-on)
16. Thermal Valve Unit

COOLED AIR
HOT AIR
COOLED OIL
HOT OIL
HOT AIR/OIL MIXTURE

WATER MANAGEMENT

Frequent Water Quality Monitoring

- TDS Measurement:
  - Use a TDS meter to regularly check the Total Dissolved Solids (TDS) level in the process water.
  - Ensure the TDS remains below 300 ppm.
- pH Measurement:
  - Use a pH meter or pH test strips to monitor the pH level.
  - Maintain the pH within the range of 6.5 to 7.0.

Frequency, Check water quality daily or during each production batch to ensure consistency.

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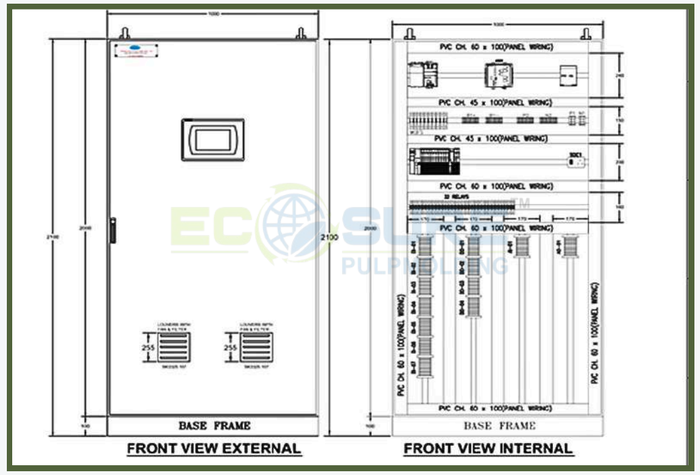
THERMIC FLUID HEATER

A thermic fluid heater is industrial heating equipment used where only heat transfer is desired instead of pressure. In this equipment, a thermic fluid is circulated throughout the system to transfer heat to the desired processes. The thermic fluid heater is used for drying our pulp molding final products.

AUTOMATION PANEL

Automation start from the dry/wet pulp feeding, as we feed pulp on conveyor and submit the quantity in PLC through HMI, Automation go start up to required consistency maintenance continuously in final tank and supply to forming machine, in any deviation indication come with error show in HMI.



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WHY CHOOSE ECOSURE PULPMOLDING TECHNOLOGIES LIMITED?

With a mission to lead the shift toward a sustainable future, EPTL specializes in eco-friendly, fiber-based solutions and cutting-edge manufacturing technology.

Our Expertise Includes

- Fully automatic and semi-automatic Pulpmolding machines.
- Custom-designed turnkey setups for molded fiber product plants.
- Comprehensive after-sales support and training for operators.
- Robust research and development to ensure high-efficiency operations.

Why Ecosure?

- Proven global expertise with installations in over 40 Projects.
- Tailored solutions to match client needs and regional compliance.
- A strong commitment to sustainability and green manufacturing.
- Decades of experience in advanced fiber pulpmolding technologies.

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THANK YOU

Manufacturing Units

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