ETHANOL PRODUCTION PLANT
Production size 30KLPD
An Overview

Machinery manufacturer by

BESTOMECHINES

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IEC Code: ASCPM3872E

Company introduction.

We the Bestomechines having registered office at Hyderabad and Works shed with 3000 sqft over headed carrier crane located at makarpura industrial estate Vadodara Gujarat state, we engage in design and developed machinery for different application in made in India setup, with our dedicated engineering senior team how works hard for customer service any time.

We have an indigenous development machinery with world class technology. Up to now we have supplied more than 1500 units in India and abroad. Headed by a well-known Electrical engineer with 20 years hands on experience. working with well-known Clients.

Ethanol Fuel Basics

Ethanol is a renewable fuel made from various plant materials collectively known as "biomass." More than 98% of U.S. gasoline contains ethanol to oxygenate the fuel. Typically, gasoline contains E10 (10% ethanol, 90% gasoline), which reduces air pollution.

Ethanol is also available as E85 (or flex fuel), which can be used in flexible fuel vehicles, designed to operate on any blend of gasoline and ethanol up to 83%. Another blend, E15, is approved for use in model year 2001 and newer light-duty vehicles.

There are several steps involved in making ethanol available as a vehicle fuel:

- Biomass feedstocks are grown, collected, and transported to an ethanol production facility.
- Feedstocks are converted to ethanol at a production facility and then transported to a fuel terminal or end-user by rail, truck, or barge.
- E10 is sourced from fuel terminals whereas E85 is sourced from a terminal or directly from an ethanol production facility.
- E15 is available from fuel terminals or

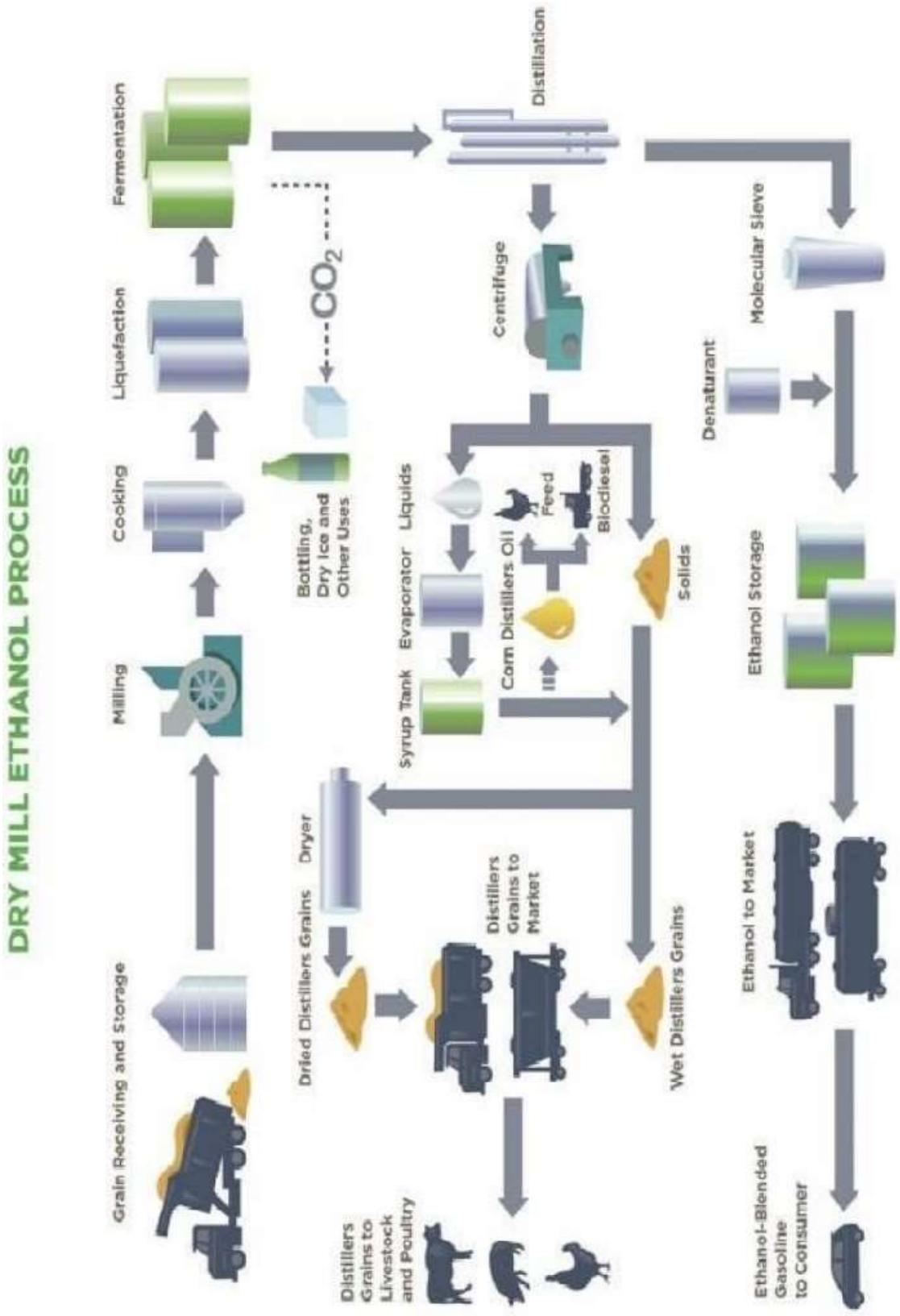
through a blender pump dispenser that draws from E10 and E85 tanks at a station.

Fuel Properties

Ethanol (CH_3CH_2OH) is a clear, colourless liquid. It is also known as ethyl alcohol, grain alcohol, and EtOH Ethanol has

the same chemical formula regardless of whether it is produced
from starch- or sugar-based feedstocks, such as corn grain (as it primarily is in the United States), sugar cane (as it primarily is in Brazil), or from cellulosic feedstocks (such as wood chips or crop residues).
Ethanol has a higher-octane number than gasoline, providing premium blending properties. Minimum octane number requirements for gasoline prevent engine knocking and ensure drivability. Lower-octane gasoline is blended with 10% ethanol to attain the standard 87 octane.
Ethanol contains less energy per gallon than gasoline, to varying degrees, depending on the volume percentage of ethanol in the blend. Denatured ethanol (98% ethanol) contains about 30% less energy than gasoline per gallon.
Ethanol's impact on fuel economy is dependent on the ethanol content in the fuel and whether an engine is optimized to run on gasoline or ethanol. Ethanol Energy Balance in the United States, 94% of ethanol is produced from the starch in corn grain. Energy is required to turn any raw feedstock into ethanol. Ethanol produced from corn demonstrates a positive energy balance, meaning that the process of producing ethanol fuel does not require more energy than the amount of energy contained in the fuel itself. Cellulosic ethanol improves the energy balance of ethanol because the feedstocks are either waste, coproducts of another industry (wood, crop residues), or dedicated crops—such as switchgrass and miscanthus—with lower water and fertilizer requirements compared to corn.
When biomass is used to power the process of converting non-food-based feedstocks into cellulosic ethanol, the amount of fossil fuel energy used in production is reduced Ven further. Another benefit of cellulosic ethanol is that it results in lower levels of life cycle greenhouse gas emissions.

Flow Chart


DRY MILL ETHANOL PROCESS
Grain Receiving and Storage
Milling
Cooking
Liquefaction
Fermentation
CO_2
Bottling, Dry Ice and Other Uses
Distillation
Centrifuge
Molecular Sieve
Denaturant
Ethanol Storage
Ethanol to Market
Ethanol-Blended Gasoline to Consumer
Syrup Tank
Evaporator
Liquids
Solids
Corn Distillers Oil
Feed
Biodiesel
Dryer
Dried Distillers Grains
Distillers Grains to Market
Wet Distillers Grains
Distillers Grains to Livestock and Poultry

List of Machinery Required.

Sr.No	Description
1.	Grain Milling Machine (Hammer Mill)
2.	Slurry Making Tank
3.	Jet Cooking Machine (Reactor)
4.	Cooling Tank
5.	Fermentation Tank
6.	Settling Tank
7.	Distillation Tower (3 Pass)
8.	Molecular Sieve
9.	Centrifugal Dryer
10.	Pallet Making Machine (Cattle Feed)
11.	Boiler with Chimney
12.	Ethanol Storage & Truck Loading System
13.	Water Treatment Plant
14	Boiler and accessories Capacity: 15 TPH
15	Turbine & Accessories Capacity: 3 MWhr

Financial Data (30KLPD)

Cost of the Project
Cost of 30 KLPD Ethanol plant =34,00,00,000.00
Boiler (15TPH) along Turbine =4,50,00,000.00
Water treatment Plant =2,50,00,000-00
GST 18%=7,38,00,000.00,
Total=48,38,00,000-00

Area required = 8 acers

Land Cost = 5,00,00,000.00
Cost of construction (Office, Lab, Water Bore well and Boundary wall Etc) =100,00,000 (APPROX)
Variable cost-(Raw Material, Power Chemical) =2,00,00,000-00
Raw Material =2.00
Monthly Requirement 1500000kgs
Total cost =6300000.00
Power Cost =6/units
Monthly Bill: 120000(Approx)
Chemical: 7000 kg
Labour Charges 240000.00
Total cost
(48,38,00,000-00 +5,00,00,000+1,00,00,000+2,00,00,000)
=56,38,00,000-00

Income

1. Daily Expenditure = 1075280.00
2. Daily Production=30000 Ltr
3. Rate of Ethanol = 55/Ltr
4. Daily Income= 30000X55= 1650000 (Ethanol)
5. Daily production of Cattle Feed = 84000 Kgs
6. Rate of Cattle Feed =32/Kg
7. Income from Cattle Feed = 32X84000=2688000
8. Rate of Corn Oil= 150/Litre
9. Sub-Total Income (Daily)= 1650000+2688000=4338000
10. GST 5%: 216900
11. Total: 4554900.00

CALCULATION:

Total Investment: 406700000 .00
Daily Expenditure: 1075280.00
Monthly Expenditure: 32258400.00
Yearly Expenditure (350 Days): 376348000.00 (Based on the calculation given)
Daily Income: 4554900.00
Yearly Income (330 Days): 1503117000.00
Bank Loan: 300000000.00
Bank Interest: 12%
Subsidy on Interest: 6%
Payable Interest: 6%
Loan Tenure: 5 Year
Amount of Interest (Year) 18000000
Total Interest (5 Year): 90000000
Total Amount Payable: (300000000 +90000000) = 390000000.00

EMI (Yearly): 78000000.00

Net Profit (after all Payable)
(1503117000-32258400-78000000): 1,39,28,58,600.00

Licence to be taken from:

1) PESO- Explosive Licence
2) Environmental Clearance
3) FIRE (NOC)
4) GST
5) MSME
6) Excise

ETHANOL BUYER

1) Indian Oil
2) Bharat Petroleum
3) HP
4) Medical Company
5) Perfume company
6) Paint company
7) Cosmetic company
8) ETC

Payments

After receiving the Advance payment, we start doing the work of the project.
50 % advance payment against purchase order.
Remaining as per the work progress.
All taxes are extra as per government of India Norms.
Once placed order will not be cancel or repay the amount.
All machinery has one-year onsite warranty for manufacturer defects only.
All matter will be settled down under Telangana jurisdiction only.
All payments will be deposited in our Designated Bank account online only.

Bank Name: STATE BANK OF INDIA, BODUPPAL
Bank Account No.: 40090535033
Bank IFSC code: SBIN0012665
Account Holder Name: BESTOMECHINES

Thanks, you sir,

BESTOMECHINES

Proprietor