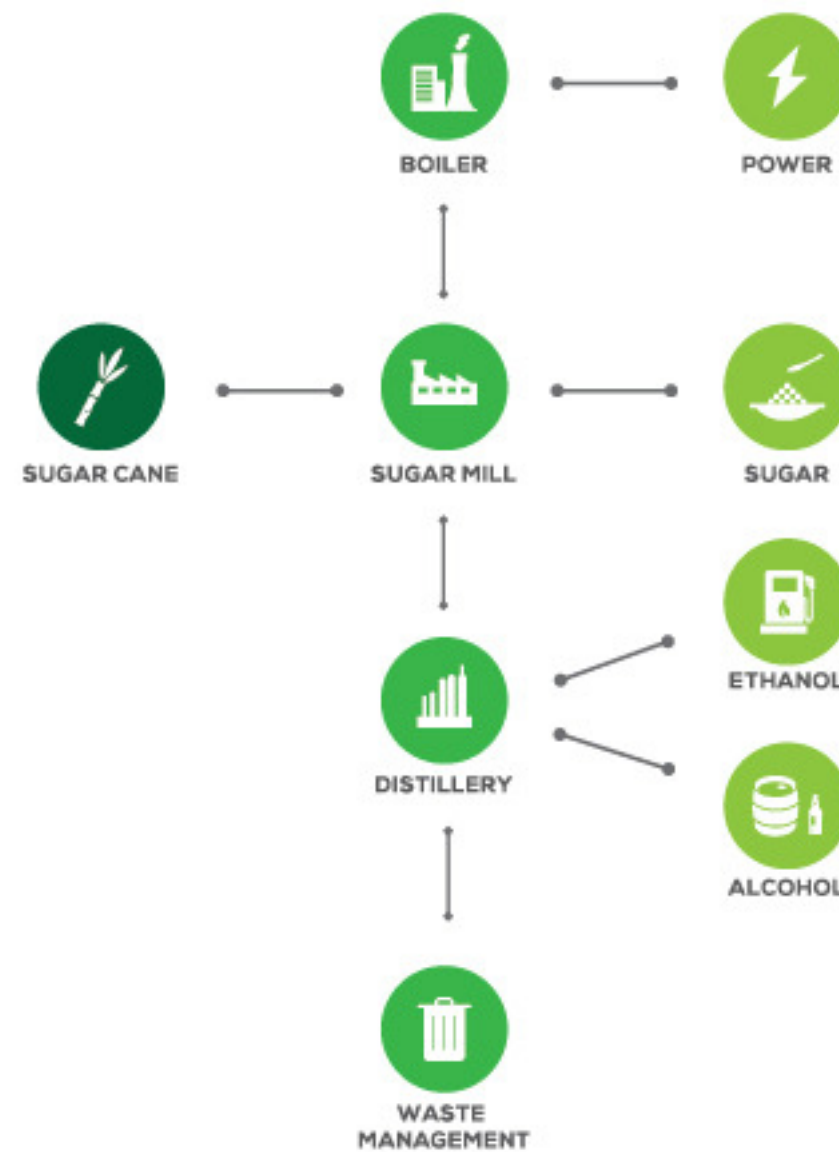


MERU INDUSTRIES





PROFILE

India is one of the largest producers of sugar in the world. The sugar industry is one of the highest contributors to the Indian economy. Technological advancements over two centuries are unparalleled in the world. Established in 1988, Meru Industries has provided cost-effective, tailor-made designs and solutions in the Sugar industry for over two decades across the globe.

Meru Industries is an established manufacturer and solutions provider in the field of Sugar, Power and Bio Fuel. Meru Industries has been empowering core sector industry with technology, innovation and engineering excellence. Using strong foundations and cutting edge innovation, Meru is helping industries become competitive the world over.

In the past, increasing efficiency and production of sugar plants had two major hurdles in lack of space and money. Meru Industries started with an idea of modernization and retrofitting to overcome these roadblocks. Continuous improvements over the last two decades on this core idea has led to Meru being known as a leader of technology and efficiency driven turnkey solutions provider across the globe.

Over the course of multiple projects with numerous clients, Meru Industries has achieved targeted production within the allotted time schedule, budgets and approvals from the government organisations like The Sugar Commissionerate, NCDC, NFCST and IBR, etc. This has propelled clients, not only from India but also the rest of the world, to call upon Meru Industries for their project requirements in Sugar, Power and Bio Fuel.



ENGINEERING

Meru Industries focuses on providing sophisticated and comprehensive, design and engineering solutions. This involves a thorough analysis of all key parameters like environmental conditions, working duty requirements, safety, ease of operations, maintenance and, above all, productivity.

Systematic integration of Engineering, Design, Manufacturing and Quality Assurance ensures greater co-ordination and cohesion. This leads to a considerable reduction in cycle time and integrated holistic solutions. Optimal selection and design of equipments helps customers to increase their returns on investment.

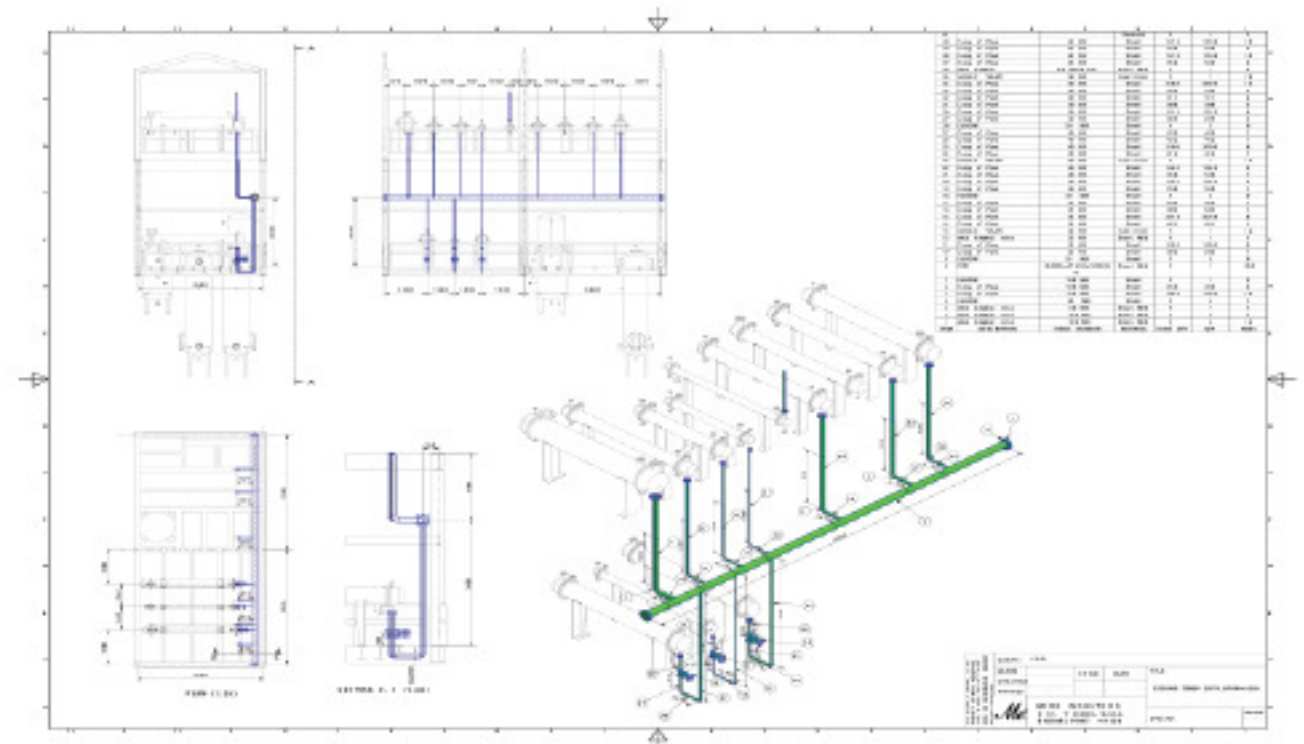
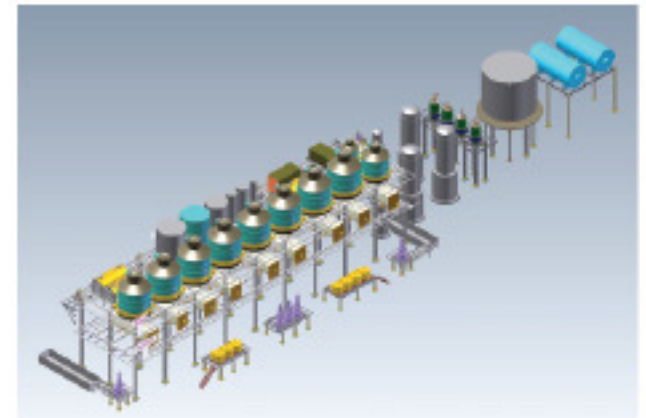
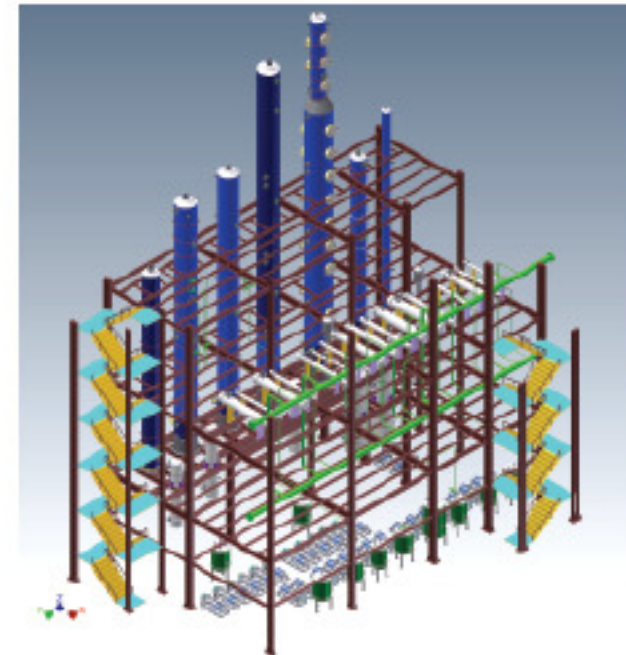
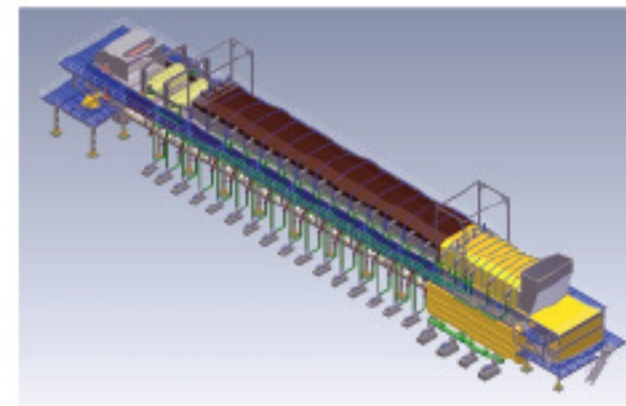
Extensive use of Information Technology provides precise solutions for all aspects of design and engineering. Meru has retained its technological edge through continuous training in latest softwares and systematic hardware upgrades.

A team of dynamic, experienced and technically proficient engineers provide expertise for tailor-made requirements of clients through -

Applied Plant Scale Research
Procurement Specifications
Fabrication Drawings

Civil & Structural Design
Process Engineering
Detailed Engineering

Erection, Operation & Maintenance Manuals
Training of Personnel
Retrofitting & Modernization





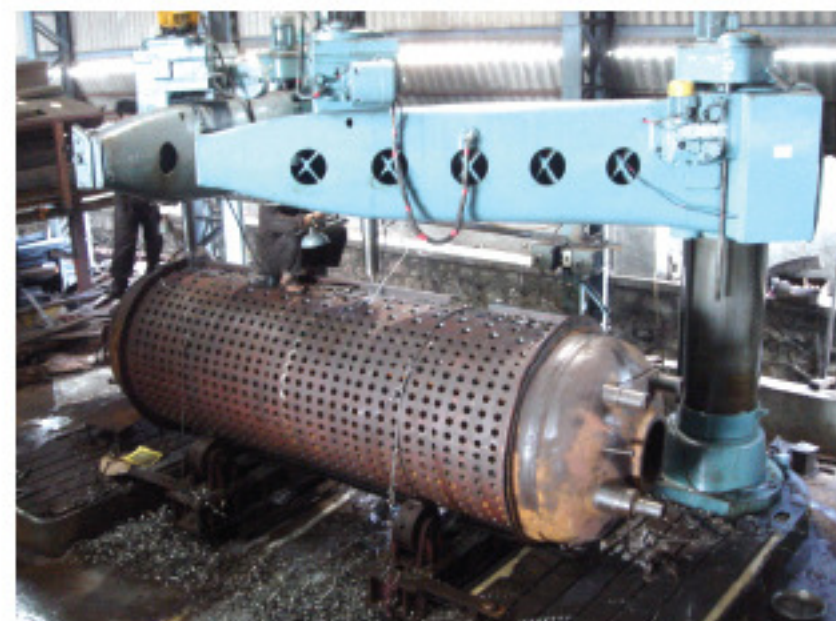
MANUFACTURING

A vital component in the operations of Meru Industries is the infrastructure at disposal for all manufacturing and erection needs. Our manufacturing facilities are well equipped with all kinds of machines to cater to the requirements of our customers. A total of four plants within the industrial hub of Pune city with various machines enable us to create and deliver components of any scale and magnitude with ease.

Quality is given due importance at every stage in the process, right from material procurement to testing for critical ratings of finished components. In-house testing facilities for Radiography, PMI and Ultrasonic enable quicker results and lesser delays in project deliveries. The Quality team is also equipped with Welding inspectors, Level II certified inspectors, etc. for DP, Radiography, UT & visual inspection.

Performance on fully rated capacities over longer spans for the industrial plants and equipments from Meru Industries are a given. This is down to the best processing conditions and highest quality workmanship on the parts and components manufactured at our plants.

A strict adherence to critical manufacturing steps enables the company to maintain international standards and the finest levels of workmanship and manufacturing. Meticulous process planning and constant review leads to the best processes for the production of the components by specifying operation sequences, special tooling and careful consideration to the parameters of quality, cost and delivery schedules.



SUGAR

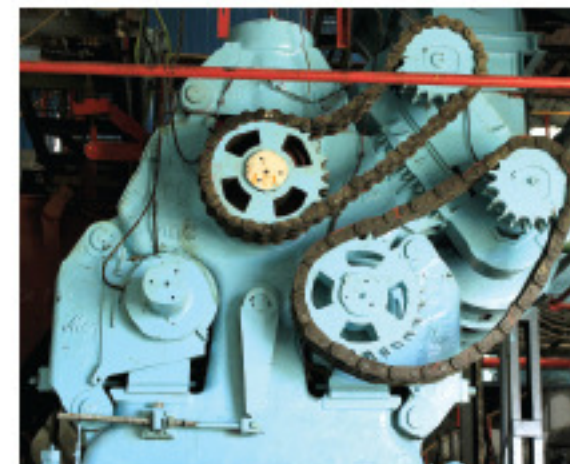
Meru has led from the front through innovation and advancements in technology in revolutionizing the sugar industry over the last two decades. This has been possible through persistent focus on safety, reliability and productivity. High efficiency products from Meru – Milling Plants, Boilers, Continuous Pans, Falling Film Evaporators, Refineries and other process house equipments enable sugar factories to optimize capacity and efficiency. All this, while increasing capacity, steam economy and quality of sugar.

Meru Industries undertakes all types of sugar plant projects - from selection of equipments, design, manufacturing, supply and erection to commissioning.

Meru provides unmatched expertise in expansion of existing sugar plants through renovation and modernization. This includes integration of new equipments for increased capacity, efficiency and production quality.

HIGHLIGHTS :

- Plants ranging from 1250 TCD to 15000 TCD
- Manufactures mills from 24" X 48" to 50 X 100"
- Manufactures Diffusers up to 10000 TCD
- Boiling house with Falling film and Robert type evaporators
- Batch and continuous Vacuum Pan
- Fully automated DCS Plants





POWER

Meru is a technology-driven engineering powerhouse with a comprehensive range of steam generation plants. These include solid fuel fired boilers (coal, lignite, pet coke, bagasse, biomass, others), waste heat recovery boilers and oil/gas boilers. The steam generation plants are also available separately and have attained industry benchmarks for their multi-fuel capability, high efficiency, reliability and environmental friendliness.

Meru possesses well-equipped manufacturing facilities and a strong team of qualified and skilled professionals from mechanical, electrical, civil, instrumentation, erection and field services. This places it in an ideal position to meet the demanding requirements of industrial users. Meru Boilers are in compliance with ASME/IBR codes.

Boilers and power plants from Meru find their applications in a wide range of industries. They meet the needs for process steam, co-generation and captive power generation.

HIGHLIGHTS :

- Single drum, Bi-Drum Boilers
- High Pressure Boilers up to 125 kg/cm²
- DCS based optimization
- Balance of Plant
- Electrification



ETHANOL

Meru offers tailor-made distilleries and ethanol plants in compliance with client requirements to produce different grades of alcohol with minimum impure spirit production.

Meru's flexible Batch/Semi-continuous/Continuous fermentation designs can handle multiple feedstocks. These produce different grades of alcohol with consistency and high alcohol yield. Meru's Vacuum/Multi-pressure Distillation technology, which is internationally accepted, ensures reduced steam consumption, lower power utilization and lesser production costs.

Ethanol/Biofuels are produced with fully automated molecular Sieve technology. They are also supplied in the skid mounted condition to reduce construction time at the site. Along with Green field projects and supply of equipments, Meru also offers services of plant enhancement and expansion, reduction of production cost and effluent load to save energy.

HIGHLIGHTS:

- Anhydrous Alcohol - Fuel grade (Ethanol)
- Hydrated Alcohol
- Rectified Spirit
- Extra Neutral Alcohol
- Export quality rectified spirit
- Industrial Grade Alcohol
- Feedstock : Sugar based Raw materials - Molasses, sugar syrup & juice
- Feedstock : Starch based Raw materials - Maize, Cassava, Sorghum & other grains





MODERNIZATION

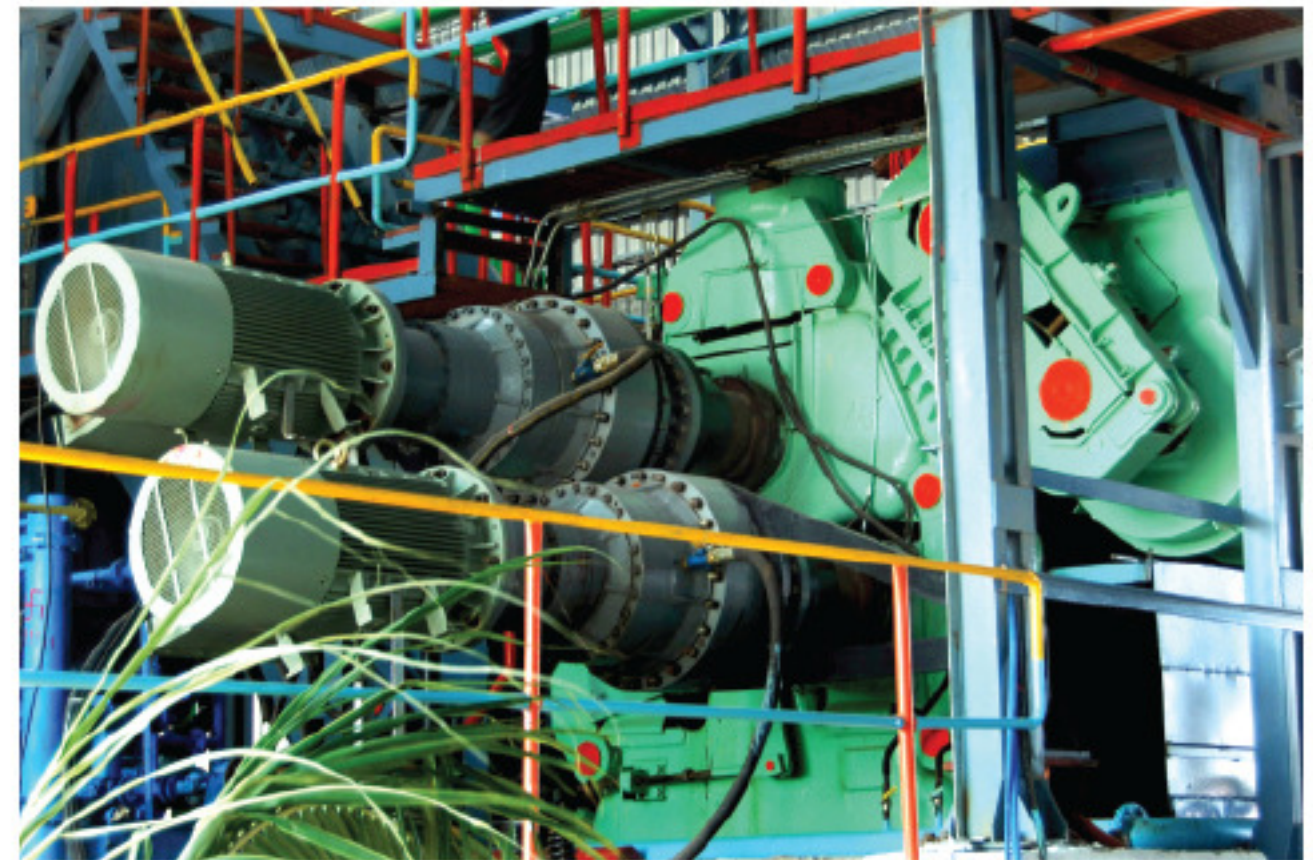
At Meru, we strive to add value and new technology to the existing state of the Sugar industry and not repeat a winning formula that has helped Meru grow leaps and bounds over the last two decades. Constant evolution of ideas and technology is the backbone for the functioning of Meru.

Over the last two decades, Meru Industries has delivered critically acclaimed quality standards, successful performance parameters in tailor-made sugar plants and distilleries along with high efficiency and energy conservation. With an experienced team of well-qualified engineers, managers, commercial and administrative staff, Meru Industries believes in identifying and analyzing the requirements of its clients to deliver results.

Continuous upgrading and modernization of equipments and plants is an area which is vital in the sugar, power and bio-fuel industries. Increasing capacity and efficiency without high investments and not discarding the existing equipment is a core philosophy followed at Meru.

HIGHLIGHTS :

- Increasing capacity of existing plant
- Increasing recovery of existing plant
- Increasing efficiency of existing equipments
- Lower captive consumption of electricity
- Lowering steam consumption
- Increasing capacity and temperature of Boilers





WASTE MANAGEMENT

Meru designs its distillery waste water management and solutions with the main goal of maximizing the use & recycle of the waste water and spent wash to achieve zero liquid discharge level.

- A) *Spent wash generation 1: 3.5 Lit/Lit at source in Cane juice feed stock*
70% recycle of raw spent wash.
- B) *Spent wash generation 1: 7.0 Lit/Lit in Molasses feed stock.*
30% -35 % recycle of raw spent wash.

Meru offers various eco-friendly and cost effective options adhering to pollution norms. Stand-alone evaporation and integrated evaporation with standard features of ease of operation, less cleaning time, lesser utility consumption are offered to clients.

EVAPORATION :

- A) *Integrated Evaporation, Concentration up To 25%*

The integrated evaporation highly efficient compact design solution does not require additional steam and the energy from analyzer column vapours is utilized.

- B) *Stand alone Evaporation, Evaporation Up to 50 % Solid Concentration*

The stand alone evaporation highly efficient compact design solution operates at lower steam consumption.

BIO - METHANATION :

Reduction of BOD & COD levels in raw spent wash. Boilers use generated methane gas to save feed stock like bagasse, coal , rice husk, etc.

BIO - COMPOSTING :

Meru provides flexibility to clients through -

- a) *Raw spent Wash*
- b) *Raw spent wash after Biogas*
- c) *Raw spent wash after evaporation*

CONDESATE POLISHING UNIT :

The polishing unit removes contaminants like silica, iron oxides, chlorides, sodium, suspended crude, etc. present in the return condensate. This improves the quality of condensate and recycles back to process water utilization.

SPENT WASH BOILER :

Meru designed Boilers operate using concentrated spent wash that couples as fuel with bagasse or coal. This leads to lowest downtime and cleaning period.



WHY MERU?

Over the years, Meru has developed its competencies and capabilities to design and engineer systems, processes, plants and products as a core technology to meet the demands of an ever-changing market. Meru builds its values and philosophies on its heritage and tradition of more than two decades. This guides our decision making and working style.

Meru guarantees the reliability of equipments over decades of operations. This is down to its robust designs and skilled workmanship. Its customer service organization provides spare parts management, auditing and retrofitting services. This furthers the lifetime and reliability of its equipments.

Meru offers services which range from basic engineering to turnkey process applications. Skilled project management, multi-disciplinary engineering expertise and professional site services enable Meru to deliver top notch performance on schedule without any compromise on quality.

Innovation and developments in processes are key in the agro industries and bio products. Meru provides test equipments and services for R&D to assist you on the feasibility phase of your project.

With an experience of over two decades, and more than 150 customers across the globe, Meru is identified as one of the most trusted names in the field of Sugar Plants & Machinery, Bio-Fuels, Alcohol Plants & Machinery and Steam and Power Generation Plants.

PROJECT
PLANNING &
MANAGEMENT

DESIGN
ENGINEERING &
MANUFACTURING

LOGISTICS
INSTALLATION &
COMMISSIONING

Meru's full fledged, in-house manufacturing facilities ensure a strict compliance to project requirements and effective control of quality with prompt deliveries.

Well-honed project management expertise seamlessly integrates the engineering, procurement and manufacturing chains. This provides the clients with a single point control for better efficiency and delivery.

Meru provides specialized training for the customers' personnel to upgrade their skill level. Continued efficiency and smooth running of plant is thus assured.

Meru has a deep understanding of the requirements of investors. This is all down to a background in sugarcane cultivation, operation of sugar mills and manufacturing of equipments for the industry.

MERU'S GLOBAL PRESENCE



A graphic showing several hands of different skin tones holding and interlocking a series of black gears of various sizes, symbolizing teamwork and industry.

VALUES

MISSION

We aspire to be the preferred organization for made to order and efficient turnkey projects for sugar, boiler and distillery solutions.

VISION

- Development and delivery of cost effective, cutting edge and prompt solutions to benefit customers and their prosperity.
- Investment in research and realization of new ideas and technologies.
- Be a socially responsible corporate citizen.
- Reducing the global carbon footprint by increased use of renewable sources of energy

INTEGRITY

Impeccable business conduct and maintenance of transparency in all interactions. Maintaining client confidentiality and adherence to regulatory guidelines and frameworks.

INNOVATION

Research and realize new ideas and technologies to create value for the business, the customers as well the industry.

RELIABILITY

Maintaining professionalism in business while being a dependable partner, creating better value in our solutions through thorough understanding of the customers' needs.

TESTIMONIALS

"The plant supplied by Meru Industries was successfully commissioned, well before the committed time and is running efficiently since day one."

- Adv. Kanawade, Chairman,

**Sahakar Maharshi Bhausaheb Thorat Sahakari Sakhar Karkhana,
(7,500 TCD - 30 MW Sugar Plant)**

"Meru Industries has provided us with service and experience that is par excellence. We placed our second order of a 5000 TCD plant with 18 MW with them and look forward to a long and everlasting working relationship."

- Siddharam Mhetre, Director,

Matoshri Laxmi Sugar Co-generation Industries Ltd. (3,500 TCD- 10 MW Sugar Plant)

Gokul Sugar Industries Ltd. (5,000 TCD - 18 MW Sugar Plant)

"We were able to draw anhydrous alcohol without any revision in the plant which passed the DOE standard. The quality of equipments and workmanship provided by Meru Industries for our project has been excellent. Highly recommended."

- Romulo Kehyeng, Owner,

Far East Alcohol (50 KLPD Ethanol Plant)

"We've had a wonderful experience with Meru Industries. A company with unparalleled values and commitment."

-Joel Lunguban, Project Manager,

Japanese Gas Corporation

Green Future Innovation Inc. (200 KLPD Bio-Ethanol Plant)

"We achieved entire crushing season from day one, all thanks to the prompt delivery and commissioning by Meru."

-Amit Prabhakar Kore, Chairman,

Shree Dudhganga Krishna SSK Ltd. (Expansion from 6,000-10,000 TCD)

Vice President, National Federation of Cooperative Sugar Factories Ltd.

"We would like to congratulate Meru Industries on successfully completing a challenging, full automated 30 MW Co-generation plant within 12 months."

- Ranjeet Mulay, Managing Director,

Gangamai Industries and Construction Ltd. (6,500 TCD - 30 MW Sugar Plant)



Corporate Office :

Plot No T-165/1/6,
MIDC Bhosari,
Pune - 411 026.
India

Tel: +91-20-2711 0181

Fax: +91-20-2712 2948

Registered Office :

S-31, T Block,
MIDC Bhosari,
Pune - 411026
India

info@meruindustries.com

www.meruindustries.com