SHACHI
Passion Powered Performance

Spray Congealing | Dryers | Evaporators | ATFDS | ZLD
www.**shachiengineering**.com

Performance Focused Process

- Spray Dryers
- Spray Cooler /Spray Congealing/ Beading Plant
- Multi-Effect Evaporators (MEE)
- Zero Liquid Discharge Plants (ZLDs)
- Integrated Fluid Bed Dryers (IFBDs)
- Agitated Thin Film Dryers (ATFDs)
- Pilot Plants
- Spin Flash Dryers
- Flash Dryers
- KLAREN Self-cleaning Evaporator



500+ PROJECTS | **400+** CLIENTS | **10+** COUNTRIES

About Shachi

Several leading manufacturers from India and around the globe rely on Shachi's capabilities to develop innovative process engineering solutions.

We have successfully developed complete process plants for some of the most complex & large-scale operations, in record time. Our technology has delivered proven performance in 120+ applications across 10+ diverse industries.

What sets us apart?

- Engineering and technical expertise, along with a comprehensive understanding of customer requirements.
- A customer-centric approach that prioritizes the provision of customized solutions.
- The utilization of advanced engineering tools, such as Computational Fluid Dynamics (CFD) and PV-Elite, to enhance offerings.
- A commitment to quality, defined by a philosophy that adheres to global standards.
- Collaboration with established international brands for the procurement of essential components.
- Execution characterized by agility, enabling adaptation to evolving project conditions.
- An emphasis on the development of energy-efficient systems aimed at minimizing operating costs.
- Active engagement with customers to ensure the successful handover of each project.
- The maintenance of strict compliance with specified safety standards.
- Capabilities designed to serve a diverse range of industries and geographical areas.
- The provision of a comprehensive solution for all drying and evaporation needs under one roof.
- Readiness to offer rapid support for time-sensitive projects.
- A dedication to nurturing long-term relationships based on trust and mutual growth.



Spray Dryer



Integrated Fluid Bed Dryers (IFBD)



MVR Based with KLAREN-Self-Cleaning technology



Spray cooler



Multi Effect Evaporator Plant (MEE)

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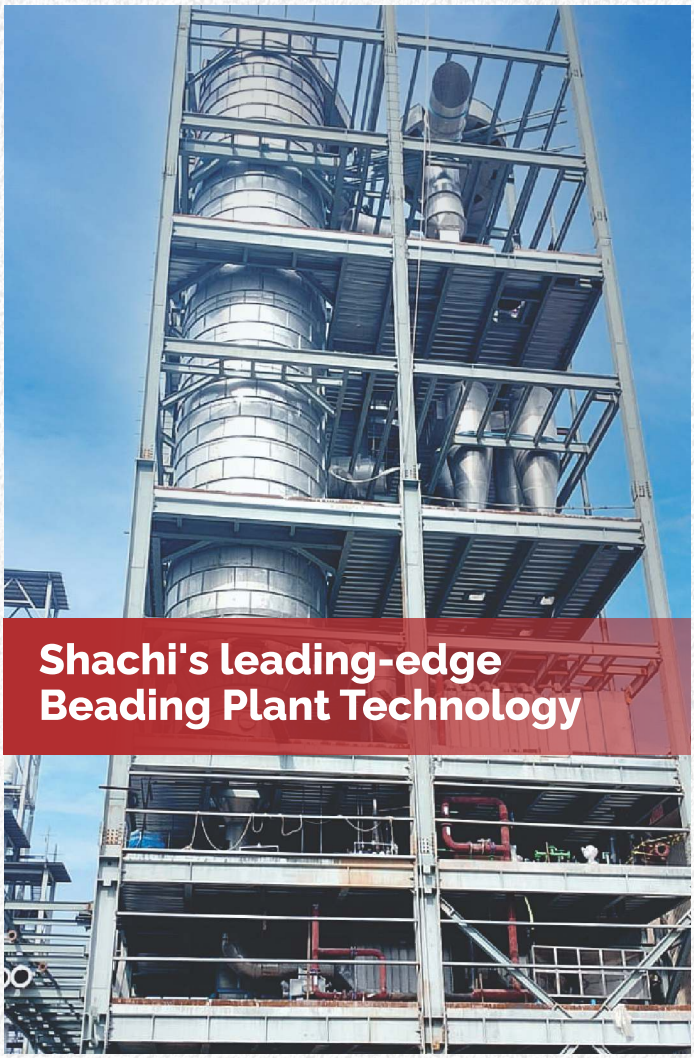
Beading Plant

Spray Congealing Plant | Spray Cooler | Prilling Plant





Spray Congealing

The process of converting Oleo Chemicals/ Castor Oil Derivatives/ Fatty Acids into spherical solid particles (Granules/Beads) using cold air.

The Operating Process Stages

- Atomisation of feed by Shachi's design nozzles
- Cold air comes in contact with particles, enabling particles/granules/beads formation.
- The spray-cooled granules/beads are further cooled in a unique Integrated fluidized bed cooler and external vibratory fluidized bed cooler to eliminate lump formation.
- Cyclon is provided to arrest the fine particles for minimum fines generation.
- The final product is collected at the discharge of the Vibrosifter.

Pivotal Features

of Shachi's Spray Congealing Plant

- Production of particles ranging from 300 to 1000 microns
- Operates on open and closed-loop configurations based on product/application requirements
- Suitable to operate for Iodine value (IV) range of 1 to 20 max.
- Optimized energy system
- High-efficiency cyclone separator for fine separation
- External Vibratory Fluidized Bed Cooler for post-cooling to avoid Lump Formation
- Uniform air distribution to get uniform product quality
- Automation for better operational control and reliability of the plant with the PLC-SCADA system
- The plant can be operated for multiple products

Key Clients

- Adani Wilmar Ltd.
- Evyap Sabun Malaysia
- PT. Sheel Oil Indonesia.
- Sheel Chand Agroils (P) Ltd.
- Alliance World Group Indonesia
- PWANI Oil Products Ltd., Kenya
- EFKO Group, Russia
- Saraiwwalaa Agro Refineries Ltd.
- Gokul Agro Resources Ltd.
- Shree Rayalaseema Alkalies & Allied Chemicals Ltd.
- Kandla Agro & Chemicals Pvt. Ltd.
- Jocil Limited.
- 3F Industries Ltd.
- N. K. industries Ltd.
- Jayant Oils Vasista Foods & Fats (P) Ltd.
- Shree Ganesh Edibles (P) Ltd.
- Baerlocher India Pvt. Ltd.
- Epitome Industries Ltd.

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SHACHIProcess SHACHIEnvironment

Applications


Stearic Acid (C18)


Palmitic Acid (C16)


Myristic Acid (C14)


Lauric Acid (C12)


Hard Palm Stearin


Hydrogenated Palm stearin (HPS)


Waxes


Esters


Glycerol monostearate (GMS)


12 Hydrogenated Stearic Acid (12HSA)


Hydrogenated Castor Oil (HCO)


Pigments/ Animal feed encapsulation


Sorbitan Tristearate (STS)


Sorbitan Monostearate (SMS)