



An ISO 9001 : 2015 Certified Company



MANUFACTURER OF MEE PLANT FOR WASTE WATER EVAPORATION WITH CRYSTALLIZER & ATFD SYSTEM FOR COMPLETE ZERO LIQUID DISCHARGE



OUR MANUFACTURING EXPERTISES AS MENTIONED BELOW PLANTS

- | | |
|--|-------------------------------------|
| 1) Multiple Effect Evaporation System (MEEP) | 7) Solvent Recovery Stripper System |
| 2) Falling Film Evaporator Plants | 8) Vacuum Crystalliser System |
| 3) Forced Circulation Evaporator Plants | 9) Vacuum Pumps, Steam Ejectors |
| 4) Caustic Recovery Plants | 10) RO Plant, ETP Plant, STP Plants |
| 5) Product Recovery Plants | 11) Water Desalination Plants |
| 6) Agitated Thin Film Evaporator (ATFD) | 12) MVR |



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CAUSTIC RECOVERY PLANT

A Caustic Recovery Plant is typically a multiple effect evaporation plant which will re-concentrate the weak lye by heating it in heat exchanger and when it reaches evaporator, vapour is released due to water evaporation that increases its concentration. This process is repeats itself by circulation in caustic recovery plant till the desired concentration is reached. Textile Mills involved in mercerizing of (Yarn, Woven, Knitted, Denim) cotton use caustic (NaOH) in mercerizing machines. After process in mercerizing machine this dilute caustic soda solutions come out from mercerizing machines as drain. The density of drain dilute caustic solution varies from 3% to 8% (31 to 87 gm/ltr). The drained weak lye also causes financial loss not only by removal but also by process incurred to remove it, i.e. expense incurred in treating (neutralizing) at ETP as per pollution laws.

BENIFITS

- 1) The system re-concentrates weak caustic lye from 40 to 50 gm/ltr to 250 to 450 gm/ltr as required by the process viz. dry-in-wet or wet-in-wet mercerizing.
- 2) Fresh caustic in the process is required only for concentration variation and make-up.
- 3) Payback period of the Plant is less than 4 months for a Triple Effect Caustic Recovery plant with Surface Condenser and Thermo-compressor.
- 4) The energy of heating steam can be completely transformed into hot water. Hot Water is generated at:
 - ▶ The uncontaminated steam condensate from the first heat exchanger may be reused as boiler feed water.
 - ▶ At surface condenser hot water is generated by soft water feed to the surface condenser for cooling vapour of the last effect.
 - ▶ The result is eventually soft water of a high temperature, which saves cost in water softening before use in mercerizing machines .
 - ▶ Alkaline condensate is generated as the vapour condensate, which can be used as hot wash water in the mercerizing machines.
- 5) Financial savings in neutralizing agents and waste water treatment costs.

SUPPLY OF CAUSTIC RECOVERY PLANT

Party Name	Place	Capacity(KLD)
Pioneer Processing India	Tamilnadu	60 +24
Shree Bhavani Textile Processors Pvt. Ltd.	Tamilnadu	40
TheniGurukrishna Textile Mills Pvt. Ltd.	Tamilnadu	25
The Coimatore Pioneer Mercerising	Tamilnadu	20
Krishna Mercerise	Tamilnadu	5
Chemicals India	Maharashtra	75
F.M. HammeraTextile Ltd. (OSWAL)	Maharashtra	60
Nandan Denim Ltd.	Gujarat	120
Nandan Denim Ltd.	Gujarat	175
Meena Prints Pvt. Ltd.	Gujarat	10
OM Yarn Plus Pvt. Ltd.	Punjab	75
Tulsi Cotton Mills Pvt. Ltd.	Rajasthan	5



AGITATED THIN FILM DRYER (ATFD)

Welcome to the world of Agitated Thin Film Dryer (ATFD) and other heat transfer equipments. Ketav Consultant leads by virtue of superior engineering design capabilities, manufacturing excellence and a project based approach committed to deliver high performance total evaporation solution customized to our client requirement.

Ketav Consultant offer ATFD as a single point solution for all kind of drying application. Our ATFD's are running smoothly for production and effluent purpose in chemical Pharma, Textile , Food and Beverage Industries.

OPERATING PRINCIPLE :

- ▶ ATFD is stands for evaporation of water/solvents to make concentrated liquid to dry powder or flakes.
- ▶ ATFD is the ideal apparatus for continuous processing of concentrated material to dry solids. ATFD is consist of cylindrical , vertical body with heating jacket and a rotor inside of the shell which is equipped with rows and pendulum blades all over the length of the dryer. The hinged blades spread the wet feed product in a thin film over the heated wall.
- ▶ The turbulence increases as the product passes through the clearance before entering calming zone situated behind the blades as the heat will transfer from jacket to main shell under the smooth agitation water/solvent will evaporate and liquid will convert to slurry, to cake or to dry powder or flex.
- ▶ The vapors produced rise upward, counter-currrentlyto the liquid and pass through Cyclone separator mounted of vapor outlet of ATFD.
- ▶ Further these vapor will be condensed in condenser and recovered as condensate. System will be Operated under vacuum for temerature sensitive products and atmospheric condition for normal drying.



APPLICATIONS :

ATFD systems are used in Pharma Industries, Textile Industries, Agro Chemicals Industries , Sugar Industries And Effluent Treatment Plant.Drying of products, Drying of concentrated liquid for salt recovery, Drying of Chemical and petro chemical products to recover the powder

ATFD SELECTION CRITERIA :

Ketav Consultant offers following basic models of ATFD's

Area (m ²)	Diameter(mm)	Total Height(mm)
3	400	3800
5	500	4750
10	710	6300
15	900	7700
20	1000	8300
25	1150	9100
30	1250	9700
40	1550	10750
50	1700	11550



Supply of Agitated Thin Film Dryer (ATFD) System

Party Name	Place	Capacity(Kg/Hr)	Party Name	Place	Capacity(Kg/Hr)
Roquette Riddhi Siddhi Pvt. Ltd.	Karnataka	650	Sona Spinning Ltd.	Rajasthan	500
Roquette Riddhi Siddhi Pvt. Ltd.	Gujarat	750	Puja Spintex Pvt. Ltd.	Rajasthan	350
Unique Pharmaceutical Ltd.	Gujarat	500	Ranjan Polyester Ltd.	Rajasthan	350
Choksi Colors Pvt. Ltd.	Gujarat	1000	Sarvodaya India Ltd.	Rajasthan	350
Intas Pharmaceutical Ltd. -API	Gujarat	714	TPL Industries Ltd.	Rajasthan	350
Raks Pharma Pvt. Ltd. -API	Gujarat	375	Sangam India Ltd.	Rajasthan	1000
Ami Life Science Pvt. Ltd. -API	Gujarat	172	Sangam Spinning Ltd.	Rajasthan	1250
Narayan Organics Pvt. Ltd.	Gujarat	400	Anant Spintex Pvt. Ltd.	Rajasthan	500
Narayan Industries P Ltd	Gujarat	270	Armani Industry India Pvt. Ltd.	Rajasthan	250
Amishi Drugs Pvt. Ltd.	Gujarat	500	Bhavik Terryfab.	Rajasthan	750
GSP Crop Science Ltd.	Gujarat	500	Choksi Heraeus Pvt. Ltd.	Rajasthan	275
Pranav Chemicals.	Gujarat	750 + 750	Kian Chemicals Ltd.	Rajasthan	1000
Vishal fabrics Ltd. (Chiripal Group)	Gujarat	75	Meekaj Techno App Services	Punjab	500
Siddhi Weaves Pvt. Ltd.	Gujarat	500	OM Yarn Plus Pvt. Ltd.	Punjab	150
Amarjyot Chemical Ltd.	Gujarat	250	Florence Shoe Company Pvt. Ltd.	Tamilnadu	78
Unison Pharmaceuticals Ltd.	Gujarat	228	Pioneer Processing India Pvt. Ltd	Tamilnadu	500
Goodluck India Ltd.	Gujarat	342	Clifton Export Pvt. Ltd.	Tamilnadu	500
Pentaaqua Pvt. Ltd.	Gujarat	125	Kunnankalpalayam CETP Pvt. Ltd.	Tamilnadu	500
Jay Chemical Industries Ltd.	Gujarat	700 + 1000	Nectarcrafts Pvt. Ltd.	Tamilnadu	250
Jackson Chemical Industries.	Gujarat	1000	Sri Varshini Knit Printers.	Tamilnadu	150
Ramdev Chemicals Pvt. Ltd.	Gujarat	599	Andipalayam CETP Pvt. Ltd.	Tamilnadu	500
Minol Acides& Chemicals Pvt. Ltd.	Gujarat	1000	Shalimar Tanning Company.	Tamilnadu	66
Stallion Laboratories (Pvt.) Ltd.	Gujarat	125	Habeeb Tanning Company	Tamilnadu	30
Naroda Enviro Projects Pvt. Ltd. (NEPL)	Gujarat	1000	L&T Ltd.(For Ford Motor Company Ltd)	Tamilnadu	44
Kaival Chemicals Pvt. Ltd.	Gujarat	500	Janson Textiles	Tamilnadu	250
J. B. Chemicals and Pharmaceuticals Ltd.	Gujarat	133	Point Textile Pvt. Ltd.	Tamilnadu	500
Sintex Industries Limited	Gujarat	1150	Sof Tex Processing Mills	Tamilnadu	500
Dynemic Products Ltd.	Gujarat	500	Thirumalai Chemicals Ltd.	Tamilnadu	600
Bliss Industries	Gujarat	500	Shri Sai Tex Processors	Tamilnadu	500
Parikh Enterprise	Gujarat	1000	Jama Corporation Ltd.	Uttar Pradesh	500
Bhilosa Industries Pvt. Ltd.	Gujarat	500	Grasim Industries Ltd.	Uttar Pradesh	850
Unique Pharmaceuticals Laboratories	Daman	60	ACC Ltd. (Unit -Tikaria)	Uttar Pradesh	514
Dicitec Home Furnishing Pvt. Ltd.	Maharashtra	298	Mahavir SpinFab Pvt. Ltd.	Uttar Pradesh	175
Konark Fixtures Ltd. (Kolhapur) Nagrika Site	Maharashtra	230	Oren Hydro Carbon Pvt. Ltd.	Andhra Pradesh	857
Vishawat Chemicals- RO Chem	Maharashtra	50	Grasim Industries Ltd. (Aditya Birla)	Madhya Pradesh	850
Technocraft Industries Ltd.	Maharashtra	500 + 600	Maral Overseas.	Madhya Pradesh	50
Paramount Minerals &Chemicals Ltd.	Maharashtra	357	ACC Ltd. (Unit -Kymore)	Madhya Pradesh	514
CEAT Specialty Tyres Ltd.	Maharashtra	52	Tirupati Strach and Chemicals Ltd.	Madhya Pradesh	750
Suyash Organics Pvt. Ltd.	Maharashtra	1000	Bhilai Engineering Corporation (BEC)	Chhatishgarh	232
Thermax Ltd. (For Sterlite Technologies Ltd.)	Maharashtra	100	ACC Ltd. (Unit - Jamul)	Chhatishgarh	514
Sona Processor India Ltd.	Rajasthan	500	ACC Ltd. (Unit - Bargarh)	Odisha	514



REACH US

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