LIFE
WHERE THERE IS WATER, THERE IS

LIFE

Envisol
Arvind

PRESERVING ENVIRONMENT. PRESERVING LIFE
Today, planet Earth is battling a crisis – the crisis of limited water. Governments and communities across the world are constantly seeking solutions to manage water sustainability for survival of life on the planet. Against this backdrop, it is natural for industries, spanning verticals, to optimize their limited water resources to be able to connect profitability with sustainability. This is where Arvind Envisol comes in with a range of innovative, state-of-the-art waste water management technologies, products and services, customized for specific requirements of industries in India and across the world.

Launched in 2011, as part of Arvind Ltd., the 1.3 billion USD global textile conglomerate, Arvind Envisol is a world-class water management company providing end-to-end solutions for water treatment, industrial waste water treatment, sewage treatment and zero liquid discharge solutions at minimal costs. The company’s patented polymeric film evaporation technology brings you the world’s most economical evaporation technology, minimizing your operating costs and its zero liquid discharge solutions show how to combine optimum sustainability with your business’s profitability.

Today, Arvind Envisol is a company with a growing portfolio of clients who trust us with the responsibility of purifying, replenishing and recycling their water resources. For, at Envisol, we believe that water is truly the most precious resource we have to safeguard health as well as generate wealth for planet Earth.
Envisol goes the extra mile in water conservation

- **2012**
  - Acquired global patent for break through polymeric based evaporation technology

- **2013**
  - Started components business – acquired pan India distribution rights for Hydranautics membranes

- **2014**
  - Ventured into end-to-end turnkey solutions for waste water recycling
  - Bagged first international order in African continent for ZLD solution in textiles

- **2015**
  - Bagged prestigious order of 11 MLD ZLD plant at Hawassa industrial park, Ethiopia
  - Expanded presence in other countries including China

- **2016**
  - Officially launched three business verticals – Projects / Services /Spares & Components
  - In-house R&D activities initiated for next-gen technological solutions

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**One-stop solution provider for water treatment needs**

**100% external debt free company with an excellent track record in market placement**

**Strong pre-qualification references**
so Geeta doesn’t have to

ADVANTAGE ENVISOL

100+
Million litres of waste and waste water processed per day

120+
Projects executed till date

22
Registered patents across the world

• End-to-end offerings across the entire water chain including projects, spares and services
• Single window for the best globally available technologies across the entire water treatment spectrum (either through own patents or licensed partners)
• An extensive technology portfolio along with in-house R&D Center
• Proven process know-how and experience
• Experience as a reclamation plant operator
• Multinational experience, which ensures an understanding of different local needs
• Strong team of over 400 people that include industry veterans, respected by customers, vendors and competitors
BUSINESS VERTICALS

PROJECTS AND EPC
- Water treatment
- Industrial effluent treatment across sectors
- Sewage treatment
- Desalination
- High purity water solutions
- De-mineralization
- Drinking water systems
- Special capabilities on water recycling and ZLD

SPARES, CHEMICALS & COMPONENTS
- Membranes – UF/NF/RO/MBR
- Pressure tubes
- Dosing systems & Pumps
- High pressure pumps
- Filter press
- Ozonators
- FRP tanks
- Micron cartridge filters - spun and wound
- Antiscalants, membrane cleaning chemicals and biocides
- Colour removal chemicals, coagulants and polyelectrolytes
- Ion exchange resins

SERVICES
- Operations & maintenance
- Retention based services
- Retrofitting
- Water audits
- Water testing
- Training and skill development
TURNKEY EPC PROJECTS

SUSTAINABLE OUTCOMES

CUSTOMERS
Clean, efficient operations and high return on investment

SUPPLIERS
We build partnerships with our suppliers on a long term basis

EMPLOYEES
Meaningful and rewarding jobs

SOCIETY
Improved resource efficiency, clean environment, prosperity

SHAREHOLDERS
Investing in a responsible company

ECOLOGICAL FOOTPRINT
Technologies with low impact

We enable sustainable operations
ZERO LIQUID DISCHARGE

At Arvind Envisol, we believe that Zero Liquid Discharge (ZLD) solutions is the key to the future of water resource sustainability. ZLD is a water treatment process in which all the waste water is purified and recycled leaving zero discharge at the end of each treatment cycle.
Technology is the key resource that we leverage to add value to our customers and give back to the environment as a whole. The very latest in ultra-modern technology as well as innovation in the development of new and improved technology is what sets us truly apart. The wide spectrum of water treatment systems that Envisol offers include:

- PRIMARY TREATMENT
- SECONDARY TREATMENT (BIOLOGICAL PROCESSES)
- FILTRATION SYSTEMS
- ADVANCED OXIDATION
- MEMBRANE BASED TDS REDUCTION
- EVAPORATION TECHNOLOGIES
- SLUDGE MANAGEMENT TECHNOLOGIES
**WATER TREATMENT SYSTEMS**

### PRIMARY TREATMENT
- Clarifiers and clariflocculators
- Tube settlers/parallel plate separators
- High rate solid contact clarifiers
- Dissolved Air Floatation (DAF)
- E-EnviFloxx electro coagulation system
- Pipe flocculator

### SECONDARY TREATMENT (BIOLOGICAL PROCESSES)
- Activated Sludge Process (ASP)
- Extended Aeration System (EAS)
- Uplow Anaerobic Sludge Blanket Reactor (UASB)
- Sequential Batch Reactor (SBR)
- Moving Bed Bio Reactor (MBBR)
- Membrane Bio Reactor (MBR) - side stream and submerged

### FILTRATION SYSTEM
- Micron Cartridge Filtration (MCF)
- Micron Disc Filtration (MDF)
- Activated Carbon Filter (ACF) and Media Filters
- Ultra filtration (UF)
ADVANCED OXIDATION SYSTEM

- Ozonation
- Envi-Oxy system
- Envi-Hydrox system

MEMBRANE BASED TDS REDUCTION

- Nano Filtration (NF)
- Reverse Osmosis (RO) – spiral and disc
- Forward Osmosis (FO) System
- Smart RO System

EVAPORATION TECHNOLOGIES

- Mechanical Vapor Recompression (MVR)
- Multi Effect Distillation (MED)
- Multi Effect Evaporators (MEE) and Crystallizers
- Multi Stage Flash (MSF) Evaporators
- Agitated Thin Film Dryer (ATFD)

SLUDGE MANAGEMENT TECHNOLOGIES

- Sludge digester
- Incinerator
- Screw press
- Centrifuge
- Filter press
- Belt press
PATENTED POLYMERIC FILM EVAPORATION TECHNOLOGY (PFET)

SUSTAINABLE ZERO LIQUID DISCHARGE AT LOWEST OPERATING COSTS USING OUR PATENTED POLYMERIC FILM BASED EVAPORATION TECHNOLOGY.

Evaporation is the most efficient technology that works on almost all effluents but it has always been an energy intensive process. At Envisol, we break this stereotype and introduce you to the world’s most economical, sustainable, highly effective and fully automated polymeric film evaporation technology based on mechanical vapour re-compression technique.

FEATURES

• PFET allows convenient retrofitting in existing schemes in order to derive maximum advantage over MEE

• Lowers the capex of boilers as PFET system requires a much lesser capacity boiler

• No need for major civil construction, only vessel foundation required

• Fully automated system with remote monitoring; no dedicated manpower required

• VFD system supplied to allow flexibility in operations and energy usage optimization

• Standard and high quality products used to increase the system longevity

• Available in standard capacities of 50, 100, 150, 200, 250, 300, 450 and 500 KLD systems. Bigger capacity systems available on request

• Area required for installing the system in the range of 225 m² to 1350m²
**WORKING PRINCIPLE**

*Works on the principle of mechanical vapour re-compression under vacuum. The energy source is the latent heat released when the vapour evaporated from the waste water is condensed.*

- Pre heated effluent is distributed on the polymeric bags placed inside the evaporator vessel at approx. 190mbar in vacuum
- Steam/pressurized vapour is injected into the unique “S” shaped pattern through the veins of the polymeric bag
- This steam passes on the latent heat to the effluent on the outside surface of the polymeric bag, resulting in effluent evaporation and conversion to vapour
- The vapour is sucked by a high speed fan and compressed by 20mbar to increase the vapour temperature and injected back again into the “S” shaped veins of the polymeric bag
- On the other hand, the saturated vapour inside of the veins condenses after losing latent heat and is collected as pure condensate
- The process is again repeated using the re-circulation pump which draws the effluent again and distributes it on the polymeric bag

**KEY ADVANTAGES OVER MEE**

- Less prone to scale and corrosion in comparison to metals, easy cleaning process
- Can operate on low pH, higher organic load and coloured effluent
- Lowest operating costs; steam is used for covering the minimal energy loss and saves up to 80% energy for ZLD systems as compared to other prevailing technologies
SERVICES

VALUED SERVICES, COVERING THE END TO END SPECTRUM OF THE WATER CYCLE

OPERATION & MAINTENANCE
  • Complete responsibility of operating and maintaining the customer’s plant
  • Allows the customer to focus on their core activities

RETENTION BASED SERVICES
  • Annual on-site maintenance and checking of provided equipment based on contracts

REVAMP AND RETROFITTING
  • Upgradation, modification or expansion of the existing WWTP & WTP

WATER TESTING
  • Envi – Lab facility to test the customer’s source water, effluent and report the required parameters
  • Spectrometer

WATER AUDIT & CONSULTING
  • Review of existing design parameters and quality of source
  • Recommendation to enhance the performance and longevity of the existing plant

TRAINING AND SKILL DEVELOPMENT
  • Envi – Learn training packages
  • Government approved training centers
  • Studies cover both theoretical and practical knowledge applications
SPARES

Our world class ultra modern spare parts and chemicals are just what your water treatment plant needs to keep it running efficiently round the clock and round the year.

Membranes – UF/NF/RO/MBR

Arvind Envisol is the authorized pan-India sales and service partner for Hydranautics membranes - a global leader in membrane innovations that uses the cutting edge of technology.

Pressure Tubes

Filter Press

Dosing Systems & Pumps

High pressure pumps

Ozonators

Micron cartridge filters - spun and wound

Colour removal chemicals, coagulants and polyelectrolytes

Antiscalants, membrane cleaning chemicals and biocides

Ion exchange resins

FRP tanks
INSTALLATION REFERENCES

11 MLD ZERO LIQUID DISCHARGE PLANT AT HAWASSA INDUSTRIAL PARK, ETHIOPIA

17 MLD ZLD PLANT AT ARVIND LIMITED, SANTEJ

10 MLD UF AND RO AT JASOL AND BALOTRA, RAJASTHAN
Arvind Envisol caters to a wide range of industries that include: Textiles | Automotives | Energy | Power | Oil & Gas | Infrastructure | Food & Beverages | Pharmaceuticals | Chemicals | Electronics | Metals | Manufacturing | Plastics & other industries or government bodies that may require water recycling or treatment solutions.