

THE FINAL CERTIFYING AUTHORITY FOR OUR TECHNOLOGY IS: ECOLOGY.





We Are The Doers

- Felix Industries stands out as a champion of environmental conservation, taking tangible steps in a world where many discuss sustainability but few act on it.
- Our dedication to recycling, reusing, recovering, and reducing positions us as leaders in managing solid and liquid waste.
 We're not just focused on protecting the environment; we're committed to actively improving it for a better today and tomorrow.

100 +

Projects delivered over a decade

7MLD +

of Wastewater Restored to fresh water

50 TPD

Solid and Hazardous waste restored daily

40 TP

Waste oil restored daily



About Us

- The relationship between humans and the environment is ironic; while we recognize its value, we often take it for granted.
- Felix Industries is a forward-thinking corporate movement focused on environmental conservation. Our core philosophy
 emphasizes recycling waste into reusable materials, efficiently utilizing wastewater, extracting valuable products from waste,
 and minimizing effluents.
- The mission is to prioritize the protection of our mother earth by addressing its degradation proactively rather than merely lamenting it. The focus areas include water processing and purification, recycling efforts aimed at reuse, and reducing overall wastage to ensure water sufficiency for present and our future generations. Felix Industries actively participates in the Sustainable Circular Economy to rejuvenate resources and promote sustainability.



■ Corporate Hierarchy

FELIX INDUSTRIES LTD

- Water & Wastewater Management
- Solid Waste Management (Hazardous & Non hazardous)
- Hydro Carbon Recycling
- Green Hydrogen

A

FELIX WMC PRIVATE LIMITED

Bore Well & Surface Water Processing Commercial & Residential Wastewater Processing

C

ENOVATION AQUAPROCESS PRIVATE LIMITED

Mixed Salt Separation Processing

B

RIVITA SOLUTIONS PRIVATE LIMITED

Operating Oil And Gas Technologies And Plants



FELIX INDUSTRIES LLC OMAN

Solid Waste Management (Hazardous & Non Hazardous)
Hydrocarbons & Oil Refining & Recycling



The Felix Philosophy

■ The Felix Philosophy

- Felix Industries Limited embraces the Zero Waste Philosophy, committed to ensuring that no waste is returned to nature
 after utilizing resources.
- This approach not only helps protect our planet but also creates a cleaner, healthier environment for present & Future generations to thrive in.



Together, we can make Earth a better place for all



■ Mission and Vision

Our Mission

 At Felix Industries Limited, we are committed to delivering high-quality environmental engineering services with a focus on safety, sustainability, and continuous improvement. Our mission is to:



Innovate and implement cutting-edge technologies to meet the evolving needs of our clients.



Foster a culture of excellence, integrity, and collaboration among our employees.



Minimize environmental impact through responsible practices and sustainable development.



Drive growth and value creation for our stakeholders while contributing positively to the communities we serve.

Our Vision

- Our vision is to be a global leader in sustainable and innovative environmental engineering solutions, enhancing the
 quality of life through excellence in operations and environmental stewardship by implementing our philosophy of closing
 down the loop of utilities.
- Our goal is to effectively utilize the vast urban waste and transform it into resources available across the country to generate renewable energy. In doing so, we aim to minimize environmental harm, enhance public health and well-being, and foster the nation's energy independence.



■ History of Felix









■ Water & Wastewater Management |

Global water scarcity is a critical issue impacting millions

2.2 billion

people lack access to clean drinking water

3.5 billion do not have safely

managed sanitation services.

4 billion

individuals experience severe water scarcity for at least one month each year

by 2025, 1.8 billion people could face absolute water scarcity

by **2030, 1.6 billion** may lack safely managed drinking water, potentially resulting in a 40% shortfall in global water supply compared to demand.

Case studies highlight the urgency of the water crisis

In Bangalore, India, water levels have drastically declined, requiring drilling depths of up to 1,800 feet to find water.

Cape Town, South Africa, faced a severe water crisis from 2015 to 2019, prompting residents to implement significant conservation measures.

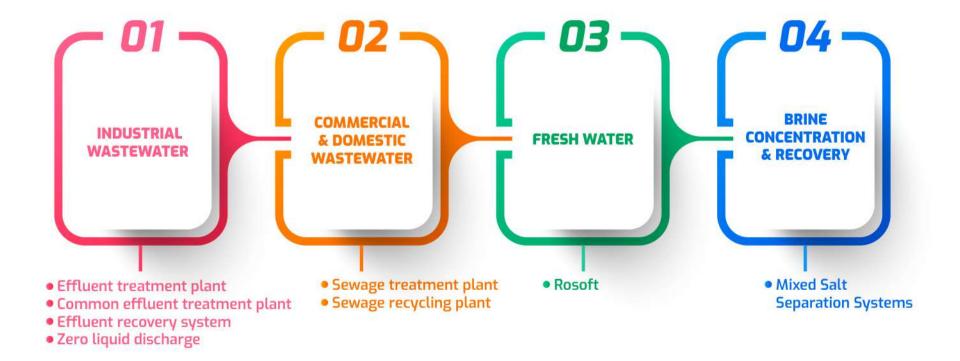
In **2019, Chennai** also experienced major water shortages, resulting in widespread rationing and public concern.

To tackle these challenges, adopting sustainable practices focused on recycling, reusing, recovering, and reducing water use is crucial

■ Water & Wastewater Management

Wastewater treatment is the means by which water that has been used and/or contaminated by Industries, Humans
or nautre is restored to a desirable quality. Treatment may consist of chemical, biological, or physical processes or a
combination thereof.

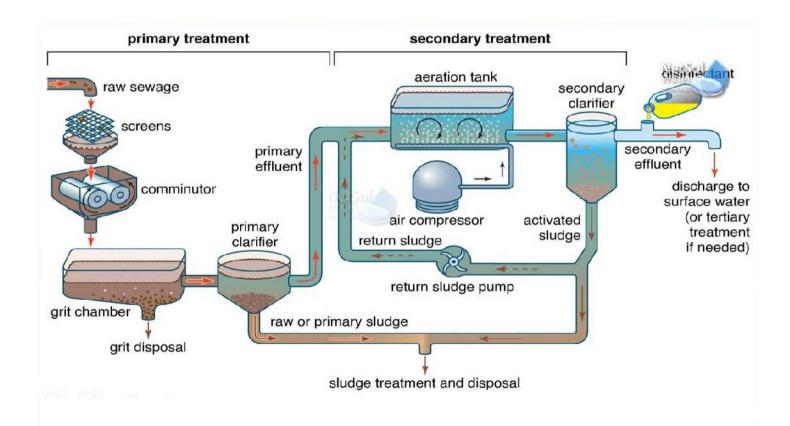
OUR SERVICES IN WASTEWATER TREATMENT PROCESS:





Industrial Wastewater

- **A. Effluent Treatment Plant:** An Effluent Treatment Plant (ETP) is a facility that treats wastewater or effluent from various sources, such as industrial processes, commercial activities, or municipal sewage systems.
- The primary function of an ETP is to remove contaminants, pollutants, and other harmful substances from wastewater before it's released into the environment or reused for non-potable applications.



Industrial Wastewater

- An Effluent Treatment Plant (ETP) processes wastewater through several stages to ensure effective treatment and compliance. It starts with preliminary treatment, which removes large solids and debris. In the primary phase, wastewater settles in sedimentationtanks, separating sludge from lighter materials.
- The secondary treatment uses microorganisms, often through activated sludge systems, to break down organic matter. Tertiary treatment employs filtration, chemical treatment, or disinfection (such as chlorination or UV) to eliminate remaining impurities and pathogens.
- The sludge is treated for safe disposal or reuse, while the treated effluent is either discharged into water bodies or reused for irrigation and industrial applications, protecting public health and the environment.
- **B.** Common Effluent Treatment Plant: A Common Effluent Treatment Plant (CETP) is a centralized facility designed to treat wastewater from multiple industries, ensuring that the effluent meets environmental standards before being discharged.

C. Effluent Recovery System

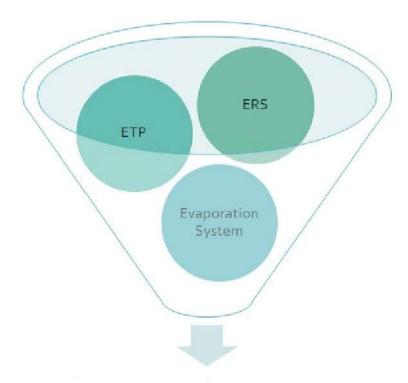
• An effluent recovery system (ERS) is designed to recover heat from wastewater, offering benefits like energy savings and improved water quality. By reducing reliance on boilers, ERS lowers energy costs and enhances efficiency, while decreasing the energy needed for wastewater treatment, resulting in cleaner water and a healthier environment.

Industrial Wastewater

• Many ERS systems feature IoT capabilities for remote monitoring. Other wastewater recovery systems include those that treat and recover polluted wastewater, wastewater heat recovery systems (WWHRS) that extract heat from sources like showers and sinks, and energy recovery turbines that harness energy from wastewater flow using balanced buckets.

D.Zero Liquid Discharge

Zero Liquid Discharge (ZLD) is a water treatment process designed to completely eliminate the discharge of liquid waste from a system. This method ensures that all wastewater is treated and recycled, leaving behind only solid residues. The primary goal of ZLD is to achieve maximum water recovery and reduce environmental pollution.



Zero Liquid Discharge



■ Commercial & Domestic Wastewater

A. Sewage Treatment Plant: A Sewage Treatment Plant (STP) cleans wastewater from homes, businesses, and other facilities, removing harmful contaminants before releasing the water back into the environment. The treatment process involves several stages to filter and purify the sewage.

Sewage treatment plants process wastewater through four stages: preliminary, primary, secondary, and tertiary treatment.

- Preliminary: Wastewater is screened to remove large solids and grit.
- Primary: Sedimentation tanks use gravity to separate solids from liquids, producing sludge for reuse or incineration if heavily contaminated.
- Secondary: Biological methods, such as activated sludge and filter beds, break down organic contaminants with beneficial bacteria. Treated wastewater may be released if safe for the environment.
- Tertiary: This stage further improves water quality for discharge into sensitive areas, involving disinfection and the removal of nutrients like phosphorus.
- **B.** Sewage Recycling Plants: A Sewage Recycling Plant takes the process a step further by treating sewage to a high standard, so the water can be reused for various purposes, such as irrigation, industrial use, or even toilet flushing, rather than being discharged.



Fresh Water

A water treatment plant is a facility that processes raw water to make it safe for consumption and use, involving multiple stages such as screening, sedimentation, filtration, and disinfection. Within this broader context.

RoSoft is a water purification plant created by Felix's team of 15 experts, aiming to provide clean and safe drinking water. It uses advanced technology to remove impurities like hardness, silica, and other contaminants from the water, making it healthier and better for daily use. The plant helps ensure that everyone can access purified water, which supports overall health and well-being





■ Brine Concentration & Recovery

A. Brine Concentration & Recovery: "Brine Concentration & Recovery" is a simpler way to describe Brine Concentration & Recovery. It involves concentrating salty water to remove and reuse the salts, making the process more environmentally friendly.

Brine concentration and recovery processes are essential for managing high-salinity wastewater in industries like desalination and mining.

Concentration Methods:

- Evaporation: Removes water to create a more concentrated solution.
- Reverse Osmosis: Separates fresh water from brine.





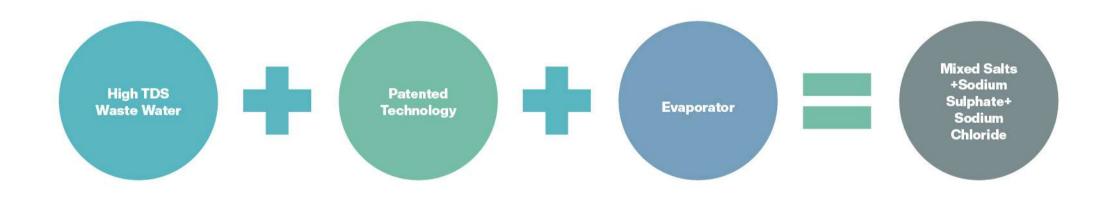
■ Brine Concentration & Recovery

Recovery Techniques:

- Crystallization: Extracts valuable salts.
- Electrodialysis: Uses advanced membrane processes to remove ions.

Zero Liquid Discharge (ZLD) Systems:

- Enhance sustainability by recovering nearly all water from brine.
- Minimize waste and reduce environmental impacts from brine disposal.
- Promote resource recovery.





■ Solid Waste Management

Solid waste treatment is the process of managing, treating, controlling and disposing of solid waste in a way that is safe and environmentally responsible. The solid waste may consist of Municipal Solid Waste, Industrial Solid Waste, Biomedical Waste, Household and other Waste.

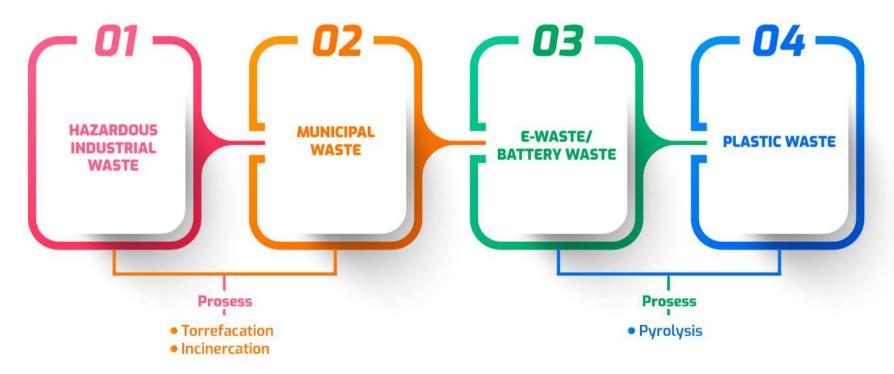
- Solid waste can affect the environment in multiple areas, including air pollution, water pollution (both surface and groundwater), and soil contamination.
- It poses risks to human health and animal health, while also impacting soil quality and fertility. Additionally, improper disposal can lead to erosion and stability issues, contributing to environmental degradation.
- Solid waste contributes to greenhouse gas emissions and can increase soil acidity. The presence of solid waste also facilitates the spread of diseases, creates fire hazards, and generates inflammable gases. Overall, the impacts of solid waste are far-reaching, underscoring the critical need for effective waste management practices.



■ Solid Waste Management

- The world produces 2.01 billion tons of municipal solid waste annually, projected to grow to 3.40 billion tons by 2050.
- Only 43 million tons of this waste are collected, with the rest ending up untreated or in landfills.
- India generates 62 million tons of waste annually, with an average growth rate of 4%.
- By 2030, India's municipal solid waste generation is expected to rise to 165 million tons.

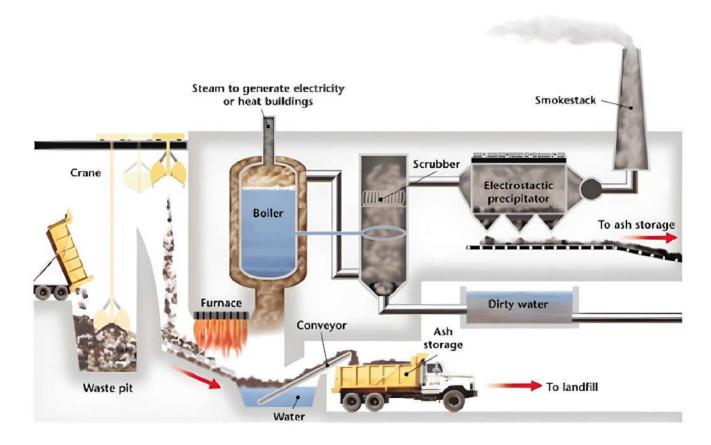
OUR SERVICES IN SOLID WASTE TREATMENT PROCESS:





■ Hazardous Industrial Solid Waste

Hazardous Industrial Waste refers to dangerous waste materials produced by industries, such as chemicals, toxic substances, or heavy metals. These wastes can be harmful to people, animals, and the environment if not properly managed.



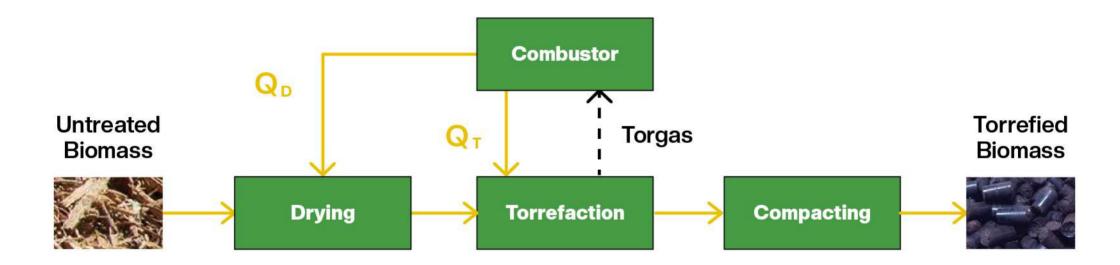
Incineration of hazardous waste is a high-temperature thermal treatment process designed to destroy hazardous organic compounds and reduce the volume and toxicity of waste. This method involves burning waste materials in a controlled environment, converting them into non-hazardous ash, gasses, and heat.



■ Municippal Solid Waste

Municipal Solid Waste (MSW) refers to the everyday garbage and trash generated by households, businesses, and public spaces. This includes items like food scraps, paper, plastics, and packaging materials.

Torrefaction Process



- Torrefaction is a thermal pre-treatment process that involves heating biomass or municipal solid waste (MSW) in an inert atmosphere (absence of oxygen) to moderate temperatures, typically between 200°C and 300°C.
- This process drives off moisture and volatile organic compounds, resulting in a dry, brittle, carbon-rich material that can be used as a fuel or for further processing.

Municippal Solid Waste

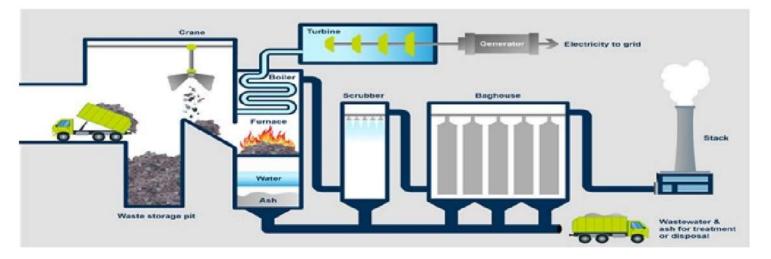
Torrificatin Plant



Torrification Plant Facility



Incineration System





■ E-Waste/ Battery Waste

E-waste/Battery Waste refers to discarded electronic devices, like old computers, phones, and batteries. These items contain valuable materials but can also be harmful to the environment if not disposed of properly.

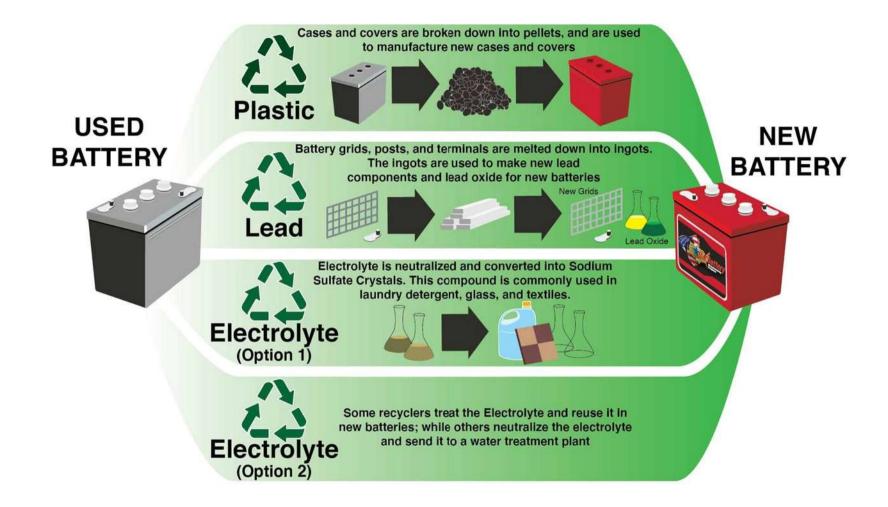
Pyrolysis Process

Pyrolysis is a thermal decomposition process that occurs without oxygen, breaking down organic materials at high temperatures (typically 300°C to 900°C). It converts biomass, plastics, and organic waste into valuable products:

- Biochar:
 A solid, carbon-rich material for soil enhancement.
- Bio-oil:
 A liquid that can be refined into fuels.
- Syngas: A gas mixture of hydrogen and carbon monoxide for energy generation.



■ E-Waste/ Battery Waste

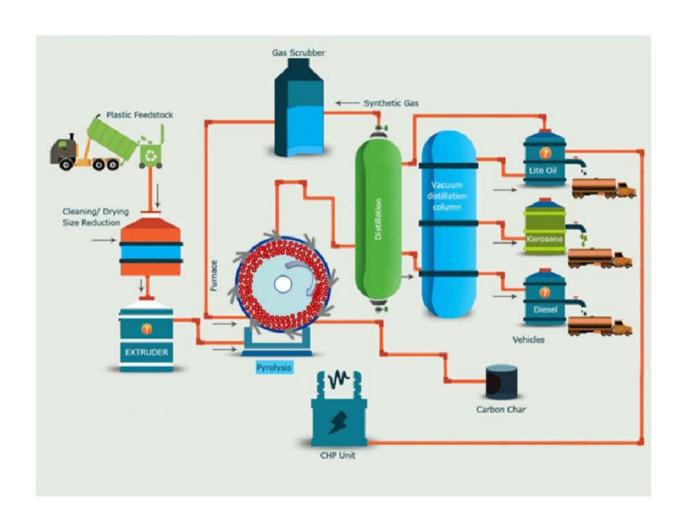


The process starts with feedstock preparation, followed by heating in a pyrolysis reactor, where the feedstock decomposes into solid, liquid, and gaseous products. Pyrolysis offers benefits such as waste reduction, resource recovery, and energy generation, making it a sustainable waste management solution that contributes to a circular economy.



■ Plastic Waste

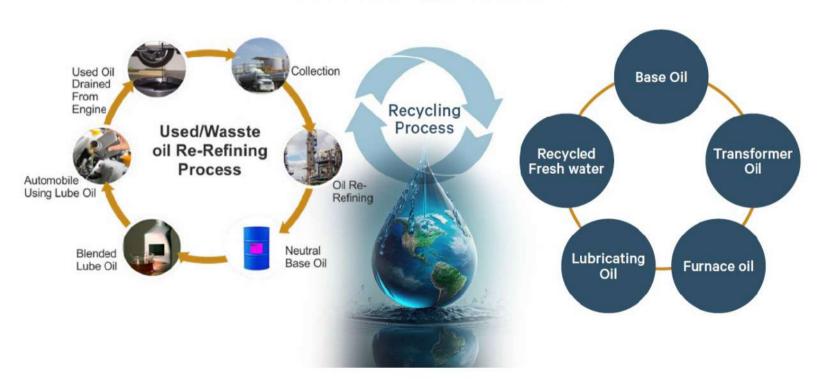
Plastic Waste refers to discarded plastic items like bottles, bags, packaging, and containers. These materials are common in everyday life but can cause environmental harm if not properly managed.





Hydrocarbon Recycling

Hydrocarbon recycling treatment is recycled carbon fuels which means liquid and gaseous fuels that are produced from liquid or solid waste streams of non- renewable origin which are not suitable for material recovery.



Hydrocarbon Recycling

Hydrocarbon recycling involves the recovery and reprocessing of hydrocarbon-based materials, such as plastics and oils, to reduce waste and conserve resources.

Process:

- Collection: Gather hydrocarbon waste materials from various sources.
- Sorting: Separate materials based on type and contamination levels.
- Processing: Use techniques such as pyrolysis or chemical recycling to convert waste back into usable hydrocarbons.

Products: Recycled hydrocarbons can be transformed into:

- New plastic products
- Fuels (e.g., diesel, gasoline)
- Feedstock for chemical manufacturing



■ Green Hydrogen

Green Hydrogen is a clean energy source produced by splitting water into hydrogen and oxygen using renewable energy like wind or solar power. This process generates hydrogen without releasing any harmful emissions, making it an environmentally friendly alternative to fossil fuels.

Green hydrogen is hydrogen produced using renewable energy, resulting in minimal carbon emissions.

Process:

- Electrolysis: Water (H₂O) is split into hydrogen (H₂) and oxygen (O₂) using electricity generated from renewable sources (e.g., solar, wind).
- Renewable Energy Source: Electricity from renewable sources powers the electrolysis process.

Production Steps:

- Water Supply: Obtain water for electrolysis.
- Electrolyzer: Use an electrolyzer to split water into hydrogen and oxygen.
- Hydrogen Collection: Capture the produced hydrogen for storage or use.



Techno-Savvy and Eco-Smart

■ Techno-Savvy and Eco-Smart

Felix Industries Limited has state-of-the-art manufacturing set-up spread over an area of 2500 sq mtr.

Felix follows all Engineering Practices as per the guidelines from ASTM & DIN set standards. Felix has in-house engineering capabilities to customize each technology to suit its individual customer requirements.

Felix is an Indian government-approved e-waste recycling company operating one of the largest recycling facilities in India, with a processing capacity of **6,000 MT** per year.

The e-waste collected from across India is aggregated, stored, dismantled, segregated and processed for reuse at this plant using ideal infrastructure, backed by optimal safety procedures and dedicated teams of experts.

Apart from the meritocratic work environment, the knowledge that their everyday work helps reinforce environmental stability in real terms, motivates Felix personnel at a very personal level.



Presence in Diverse sectors

■ Presence in Diverse Sectors

TEXTILES	SPECIALITY CHEMICALS	GLASS & GLASS PRODUCTS
PHARMACEUTICALS	FMCG	FOOD & DIARY INDUSTRY
STEEL AND ALLOYS	OIL & GAS	POWER PLANTS
DYES & PIGMENTS	PLASTIC & PLASTIC PRODUCTS	TANNERIES
AGRO INTERMEDIATES	E IT PARKS	CONSTRUCTION & BUILDING

Case Studies and Success Stories

Key Projects: Detailed case studies of successful projects.

Ahmedabad

Gujarat



Industry Name: Capital Screen Prints

Type of industry: Textile Dyeing & processing

Project details: 400 KLD - 125 KLD - Zero Liquid Discharge

Type: Wastewater - High Strength

Type of contract: EPC



Industry Name: Gujarat Metro Rail Corporation

Type of industry: Metro Rail Ahmedabad

Project details: Awarded by Gannon & Dunkerly + PSP Developers - Metro Rail Wash Water

Type: Wastewater - High Strength

Type of contract: EPC



Industry Name: Hocco Industries Pvt. Ltd.

Type of industry: Food & Beverages

Project details: 500 TPD - High Stength Waste Streams +Solid Waste Management to zero Emission

Type: Waste Management - High Strength

Type of contract: BOOT + O&M



Industry Name: Zydus Infrastructure Pvt. Ltd.

Type of industry: Pharmaceutical Cluster CETP

Project details: Project details: 3500 KLD Zero Liquid Discharge

Type: High Strength

Type of contract: BOOT + O&M

Gujarat

Himatnagar

Gujarat



Industry Name:
Colourtex Industries Pvt. Ltd.

Type of industry: Dye & pigments

Project details:
Wastewater Reclamation 100
KLD Evaporation Volume
Reduction to 25 KLD

Type: Wastewater - High Strength

Type of contract: EPC+ O&M



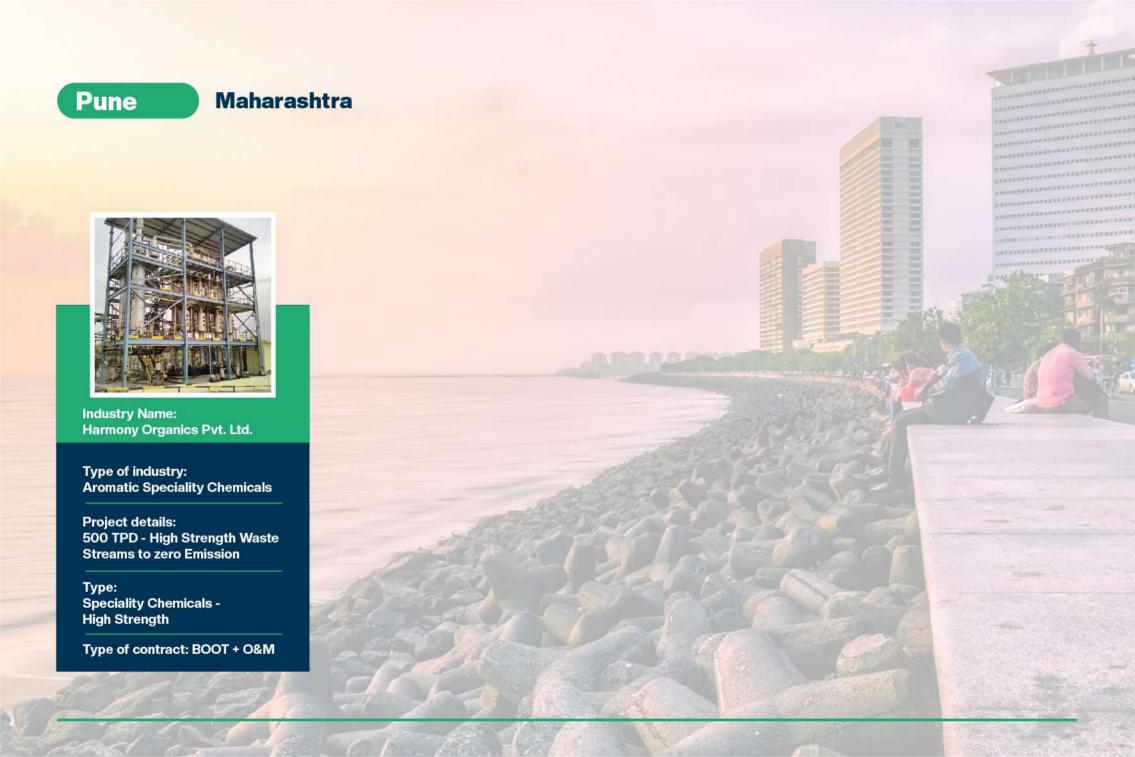
Industry Name: Sabar Dairy

Type of industry: Dairy

Project details: 1000 KLD - Waste Water Recycled to Fresh Water

Type: Wastewater - Medium Strength

Type of contract: BOOT + O&M





Oman



Industry Name: PDO Refinery

Type of industry: Oil & Natural gas Refinery

Project details: Hydrocarbon Recycling

Type:

Hazardous Oily Sludge & Crude Waste Solid Waste Management

Type of contract: BOO

Industry Name: Oman Aluminum

Type of industry: Aluminum Industry

Project details: Hazardous Waste Incineration

Type: Hazardous Industrial Sludge & Waste

Type of contract: BOO

Industry Name: Oq Refinery

Type of industry:
Oil & Natural gas Refinery

Project details: Hydrocarbon Recycling

Type: Hazardous Oily Sludge & Crude Waste Solid Waste Management

Type of contract: BOO

Industry Name: Majis

Type of industry: Waste Management Company

Project details: Solid Waste Management

Type: Biological Waste

Type of contract: BOO

Oman



Industry Name: OQ Refinery

Type of industry: Oily Sludge / Waste Oil

Project details: Oily Sludge / Waste Oil

Type: Hazardous Waste

Type of contract: BOO

Industry Name: PDO Refinery

Type of industry: Petro- Chemical Refinery

Project details: Oily Sludge / Waste Oil

Type: Hazardous Waste

Type of contract: BOO

CSR Activities

Corporate Social Responsibility (CSR): Activities and programs that contribute to social and environmental well-being.



District School, Wakro, Arunachal Pradesh







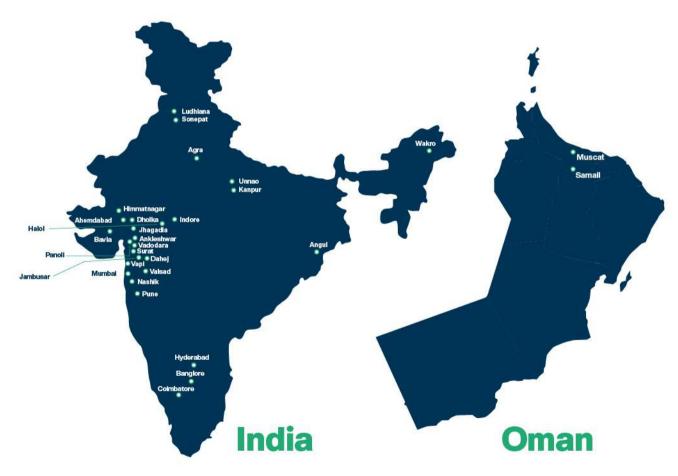


Current Locations

■ Current Locations

PRESENCE PAN INDIA & INTERNATIONALLY

The increasing environmental harassment is not just limited to third world countries but it is omnipresent wherever humans are settle and so we did not limit ourselves to just India. We started our operations in the Middle-Eastern country Oman in the year 2024. And are envisioning to expand ourselves throughout the globe so that not a single waste goes unnoticed while we discharge our waste in nature after consuming it.

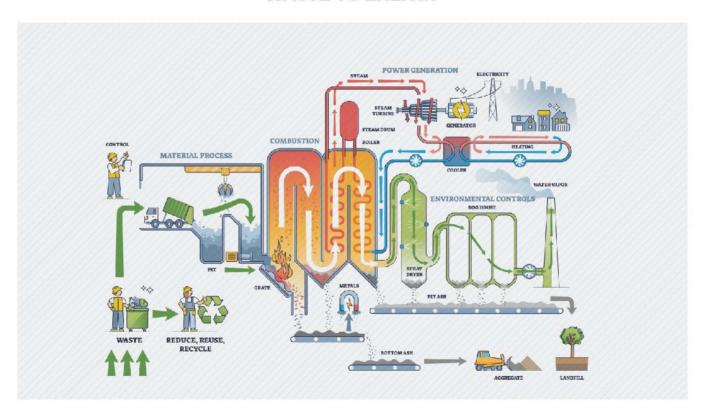




■ Future Innovations

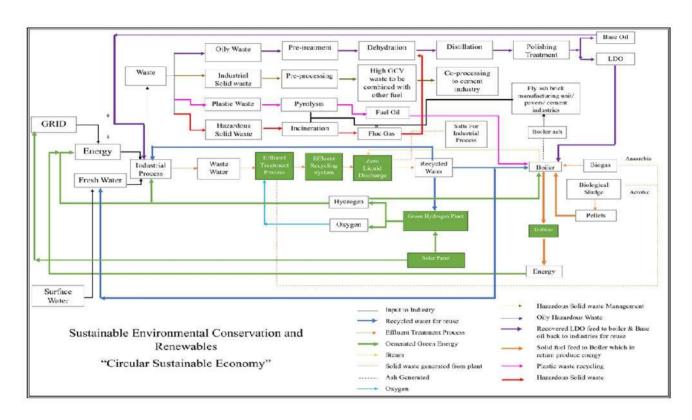
- Felix is focused on creating green hydrogen and green electricity while working towards zero waste. By making green hydrogen,
 Felix helps reduce pollution and supports cleaner energy solutions.
- Felix is creating an eco system where we convert waste into energy
- At the same time, the company is committed to not wasting resources and finding ways to recycle and reuse materials. This approach shows Felix's dedication to a sustainable and eco-friendly future..

WASTE TO ENERGY



■ Future Innovations

CIRCULAR SUSTAINABLE ECONOMY



Felix is committed to a **circular sustainable economy**, prioritizing resource efficiency and waste reduction in all its operations. By designing products that are durable, repairable, and recyclable, Felix not only minimizes environmental impact but also maximizes the lifecycle of materials. The company actively seeks renewable resources and energy sources, ensuring that its practices align with sustainable principles.

Through innovation and collaboration, Felix aims to create long-term value that benefits both the economy and the planet, demonstrating that responsible business practices can drive growth while fostering environmental stewardship.

■ Revenue Models

Sale (EPC) Engineering Procurement and Commissioning

We provide Engineering, Procurement, and Commissioning (EPC) services, an integrated project delivery method suited for large construction and industrial projects.

- -Engineering: We develop detailed designs and specifications tailored to your needs.
- -Procurement: We source and purchase all necessary materials, equipment, and services, ensuring quality and cost-effectiveness.
- -Commissioning: We rigorously test the project to confirm proper operation before handover.

By managing the entire EPC process, we streamline project execution, making it easier for you and ensuring efficient, successful project completion.

O&M (Standard One Fixed Price or Variable Price) contracts

Our Operations and Maintenance (O&M) contracts outline how we effectively manage and maintain your facility or system. We offer two contract structures:

Fixed Price Contract: We perform all specified tasks for a set fee, ensuring predictable costs and minimizing financial surprises. **Variable Price Contract:** Costs fluctuate based on actual work performed or materials used, providing flexibility to adapt to changing maintenance needs, though it may complicate budgeting.

By selecting our O&M services, you benefit from effective facility management while balancing cost certainty and adaptability.

BOO

We offer BOO (Build, Own, Operate) services, where we handle the entire process of building a facility, owning it permanently, and managing its operations to generate revenue.

Responsibilities

We design, construct, and operate the project, retaining ownership throughout its operational life.

Benefits

You gain from our expertise and investment in infrastructure while we profit from ongoing operations.

Value Proposition

With our BOO services, you ensure efficient resource management and long-term value without the burden of ownership.

BOOT (Build, Own, Operate & Transfer) contracts

We offer BOOT (Build, Own, Operate, and Transfer) contracts, where we build a facility, own it for a specified period, operate it, and then transfer ownership back to a government or public entity.

- -Process: We design and construct projects (e.g., power plants or infrastructure) while managing operations and generating revenue.
- -Transfer of Ownership: After a predetermined period, we ensure the facility is well-maintained before transferring ownership back to you.
- -Benefits: This model allows you to leverage our investment and expertise for public projects while regaining control of the asset at the end of the agreement, making it an effective solution for large projects.

PPP (Public-Private Partnership) projects

We provide Public-Private Partnership (PPP) services, collaborating with government entities to develop and manage public infrastructure and services.

- -Collaboration: We bring expertise, efficiency, and investment, while the government may provide funding or land.
- -Risk Sharing: This partnership allows us to share risks and responsibilities, facilitating the successful completion of large projects such as roads, hospitals, and schools.
- -Revenue Generation: We typically operate the project for a set period, generating revenue before transferring ownership back to the government.
- -Objective: Our PPP services aim to deliver public services effectively and efficiently, leveraging private sector innovation and resources for community benefit.

■ Ending Statement

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India generates approximately **62 million** tonnes of municipal solid waste annually, with urban areas producing up to **1 kilogram** of waste per person daily.

Over **600 million** people in India face high to extreme water stress, using about **1,100 billion** cubic meters of water annually, mainly for agriculture. Inefficient water use and leaks in urban infrastructure result in about 40% of the total water supply being wasted.

Only 30% of municipal solid waste is recycled, a challenge exacerbated by the lack of source segregation

At Felix Industries, we are dedicated to unlocking the true potential of waste through our efforts in:

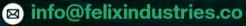
- -Cost-effective design and treatment of complex effluents.
- -Smooth project execution by uniting our teams.
- -Integrating innovative technologies to minimize environmental impact and conserve energy.

We emphasize the importance of protecting our planet and recognize the need for collaborative action to ensure a sustainable future. Join us in creating a cleaner, more sustainable world!

LET'S SAVE THE WORLD

Felix Industries Limited

123, Devraj Industrial Park, Piplaj Pirana Road. Ahmedabad - 382405, Gujarat, India.





mww.felixindustries.co