

AKSHAYA INNOTECH

Innovating for a better world..



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About Us

Akshaya Innotech is a Startup End-to-End solution provider focused on the discovery, development and commercialization of Novel Water and Waste Water Treatment Technologies, Foods, Biotechnology, Probiotics and Specialty Chemical Molecules. The company has a dedicated focus on catering to the needs of customers looking for Water, Solid waste, Bioenergy, Wastewater, and Engineering in the area of Marine, Civil, Mechanical and chemical engineering.

Backed by a Young and Energetic team consisting of Biotechnologists, Chemists, Marketing and Management Professionals, our products have been developed through extensive research over many years. The company has proven capability in R&D, Scale-up, and has state-of-the-art production facilities to manufacture a wide range of bioactive molecules.

Akshaya has an immaculately laid portfolio based on its core strengths of knowledge and experience in diversified Sciences such as **Nanotechnology, Environment, Engineering including Civil, Mechanical and Pipeline Engineering, Aquaculture, Biotechnology, Microbiology, Chemical Engineering** and many more.

Akshaya's Engineering vertical has experienced professionals in the areas of Chemical Technologies like Surface fouling of marine structures like vessels and ships, Pipeline design and fabrication services.

Akshaya's Environment vertical deals with Liquid and Solid waste treatment, pollution abatement and control, wastewater treatment and recovery, and biofuel production from solid wastes, recovery and reuse of water, organic manures and providing clean solutions.

This vertical also deals with Bioremediation, Reclamation of contaminated water bodies and sites, control of aquatic weeds using its proprietary biomolecules and enzymes.

The Biotechnology vertical deals with different segments such as Biofouling prevention, Biofilm and corrosion resistance using Microbial and biomolecule additives such as Antibacterial agents,, Sanitizers, coatings, Paint Premixes etc.).

The Food Technology Vertical deals with preparation of ready to eat packaged foods for sailors and marine professionals in remote places.

The Core value of **Akshaya** is it's committed approach to provide simple, yet effective solutions to multiple problems related to Water, Wastewater, Environment, Chemistry, Food Technology and Aquaculture problems. Working towards a cleaner environment, **Akshaya's** dedicated team of experts constantly work on bringing the latest and advanced technologies at an affordable cost.

Sister firms:

Vegesna Biosolutions, Akshaya Engineering Innovatives are the sister concern firms of **Akshaya InnoTech**, which work on large scale projects in association with the company and has experience in completing projects both in Govt ., and Private sector.

The Team:

Management:

Er. Y. Srikanth, B.E., CSE.: Managing Partner:

Er. Srikanth is an engineer with 30 years of experience in engineering and business.

Dr. Y. Gita Srikanth, Ph.D. in Social Sciences: Partner

Dr. Gita Srikanth holds a Ph.D. degree in Social Sciences and has worked on the topic of Protection of Girl and Women from Social and economic atrocities and is the founder trustee of GeethaSrikanth Foundation.

Dr. V Renu Sarath Babu, Ph.D. in Biotechnology: Partner

Dr. Sarath Babu holds a Doctoral degree in Biotechnology and has 20 Years of Research and Development Experience. He has initiated a startup **Vegesna Biosolutions** which is now a sister concern of Akshaya InnoTech and has to his credit, the best technology award by IIT Mumbai, Best startup award by Times of India, Innovative water treatment technology award for his Bio oxidation technology by the state of Andhra Pradesh.

Er. Satish Kumar, B.Tech. Chemical Engineering, M.Tech Nanotechnology: Partner

Satish Kumar is a Chemical Engineer and has a Masters in Nanotechnology.

Er. Ravi Teja Baggam, B.Tech in Mechanical Engineering, MBA in Project Management: Partner

Ravi Tea Baggam hold an experience of above 12 years in the field of Piping Materials for LNG Plants, Refineries, Offshore, FEED Projects along Water projects and worked in international locations like Seoul, South Korea and Tokyo, Japan over 8 years.

Er. N. Swami, B.Tech in Mechanical Engineering: Partner

N Swamy, Mechanical Engineer with 25 years' experience in MNC's and expert in equipment design for Lakes, water treatment & Biowaste units.

R&D Team:

Dr. Hemant Nambari, Ph.D. in Pharmacy: Hemant Nambari holds a doctoral degree in Pharmacy with experience of 7 years in the research and development field for Pharmacy along teaching.

Er. B. Keerthi Priya, Ph. D (Pursuing), M Tech: R&D Team

B.Keerthi Priya hold a bachelor's degree from Andhra University and Master's degree from GITAM UNIVERSITY on VLSI Design and presently associated as Assistant Professor in the Department of ECE, Gayatri Vidya Parishad College of Engineering (Autonomous).

Technical team:

The technical team of Akshaya has personnel from Mechanical, Electrical, Pipeline Engineering, Food Technology, Biotechnology, Civil and Electrical Engineering. The team has a consolidated experience of 50+ years in the fields of Water Treatment, Construction, R&D, Electrical and Management.

Support Team:

The support team of Akshaya consists of a team of 15 technicians trained to handle the projects from all stages of installation, commissioning and maintenance. With the strong team expertise, Akshaya provides very prompt service.

Solutions Offered:

- Domestic and Industrial Raw Water Treatment Solutions.
- Sewage and effluent treatment solutions.
- Industrial Effluent Treatment Plants,
- Solid waste management solutions, inclusion of Biodigesters, Biomethanation and Biocomposting.
- Food, Environment Equipment and Plant design, installation and commissioning.
- Ready to Eat Packed Foods.
- Pipeline Repairs and Fabrication.
- Biofouling preventing additives for paints.
- Bioremediation, Reclamation and Restoration of Polluted Water Bodies,

Product Profile:

Drinking Water Treatment Solutions:

We provide end to end Raw water treatment Solutions including

- Domestic and Commercial RO systems,
- Desalination Systems,
- Water softening equipment,
- Demineralizer water purifiers, Ultra and nano Filtration systems and

Sewage Treatment Systems :

• Ecobud Sewage Treatment Plants and STP based on SBR< MBBR and MBR Technologies, Electrocoagulation Systems for 100 % water recovery.

Effluent Treatment Technologies:

- Biological ETP & Zero Liquid Discharge Systems.
- Advanced Oxidation Technologies

Solid Waste Management Solutions:

- Domestic Waste Management Solutions
- Biogasification and Biodigester for Organic Waste.
- Solutions for Non Biodegradable Waste Management .

Food Services:

Ready to Eat Packaged Foods with long shelf life.

Pipeline Engineering Services:

Pipeline design, Engineering and Installation Services.

Ship Biocorrosion and Biofouling Prevention Services:

Nanoparticle based paint additives for painting and corrosion control.

Other Services:

Industrial Compliances related to State and Central Pollution Control Boards.

Research and Development Services.

Analytical Services for water and waste water.



Alkaline Water System



Domestic Reverse Osmosis System



Commercial RO Plants: 1 to 1000 KLH

End to End Water Treatment Solutions



Water Softening Systems



Dissolved Air Flotation System

Dissolved Air Flotation



Ultra-filtration System

Ultra-filtration System



Raw Water Treatment and clarification Systems



Raw Water Treatment and clarification System

WFI System

Waste Water Treatment Solutions



Effluent Treatment Plants



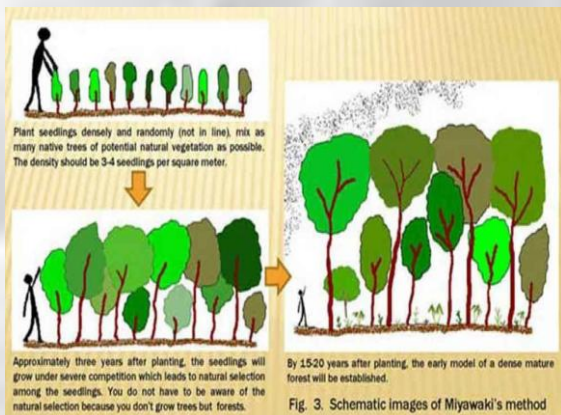
Pre fabricated STP



STP Based on REED Bed Technology



Zero Liquid Discharge Systems

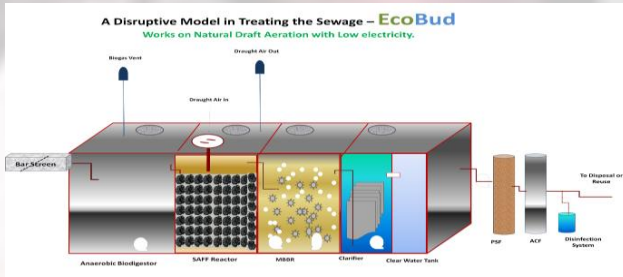


Miyawaki Forests Projects



Sewage Treatment Systems

EcoBud: A Revolutionary Low powered zero maintenance system for treatment of sewage and commercial effluents.



Salient Features of EcoBud STP:

- STP is compact, has minimum Moving Parts, Consume Very Low Power and odor free.
- The first stage of treatment provides for recovery of biogas while removing over 30-40% of the BOD/COD. The equalization tank shall be utilized for the same obviating the need for a separate tank.
- Second Stage consists of a Submerged Aerobic Fixed Film (SAFF) Bioreactor, which allows for a very high MLSS (High Microbial loading rate in a compact space).
- This is the unique feature of the **Eco-Bud system** which enables a very high rate of biodegradation of organic pollutants in the sewage.
- A turbine blower-based aeration system is provided in the next MBBR stage to remove the remaining organic loads.
- Collection cum equalization tank is used as anaerobic digester as well to reduce power requirement and recover biogas and constructed of RCC is placed below the ground level.
- A metered dosing system is provided to have better control on dosing rate and to avoid the wastage of chemical.

Advantages of EcoBud STP:

- Works on very low power (60-70% less electricity used),
- Minimum maintenance & Chemical intervention
- Minimum sludge generation and Zero odors
- 100% water recovery and reuse, capable of handling shock loads.
- Customized Microbes with high Enzymatic activity.
- Scope for energy recovery through Biogas, hence Faster Return on Investment.
- All electro-mechanical equipment's are proposed with standby units. Pumps, blowers shall be operational in auto mode through level controllers, timers etc. for easier operation.
- The system can be run on an ON-OFF Mode.

Akshaya SWM Series:

A hassle free solution for domestic Solid wastes management.

Salient Features :

- a. No pre-segregation is required.
- b. Inbuilt shredding system opens up the polythene and boxes.
- c. In-built enzyme dosing system doses microbial inoculums and enzymes to hasten the process of composting.
- d. Organic part of the solid waste converted to high quality compost within 24 hours.
- e. Compost Segregation done to separate non biodegradable matter.
- f. Composted material stored for maturation.
- g. Undegraded solids sent to a compactor machine to prepare Blocks.



Working of AEI -SWM Series:

- A. Feeding of un-segregated organic waste into composting machine.
- B. Shredding of waste and adding Bio-culture as suggested.
- C. Processing of waste into compost machine.
- D. Segregation of compost and undegraded wastes.
- E. Ready compost for use.
- F. Non-biodegradable wastes compacted into blocks.



Advantages:

- a. Low power Requirement
- b. Minimal Manpower requirement
- c. Single structure, completely enclosed modular system with Complete automation.
- d. No Physical Handling of equipment.
- e. Valuable Compost Recovered.
- f. Low Investment and Requires Low space.
- g. No risk of pests, flies and rodents.
- h. No risk of disease contamination and spread.
- i. Zero Odor and zero nuisance.
- j. Aesthetically designed.
- k. All parts made of high quality Mild steel, and contact parts of SS-304.
- l. Meets ASTM quality norms and IE-54 Safety norms.



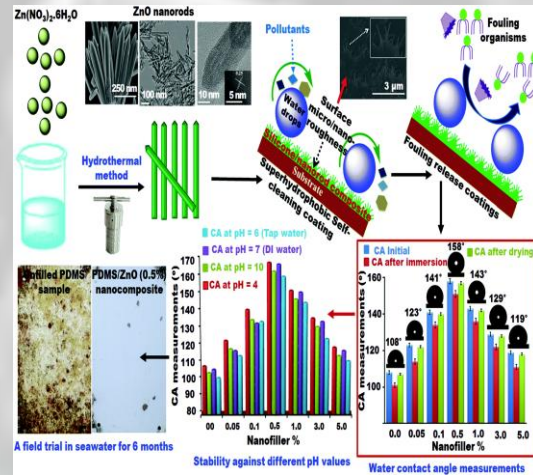
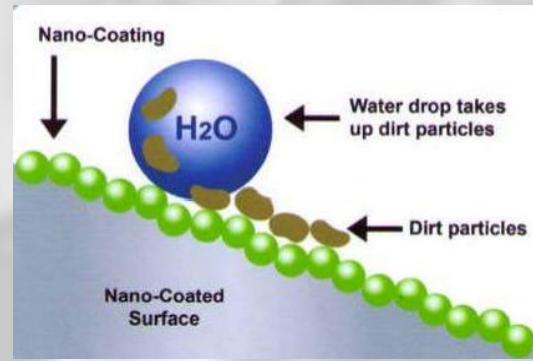
Akshaya Innotech Marine coatings

Akshaya Innotech has a portfolio of innovative nanotechnology-based coatings.

The company offers a range of nanotechnology coatings for shipping and maritime industry.

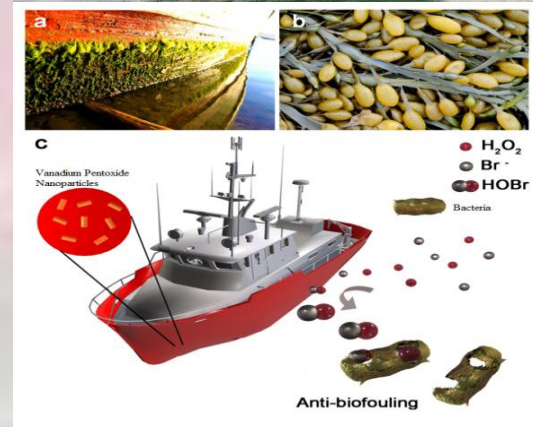
All products are specially engineered for specific surfaces and materials to protect them from manmade and environmental damage.

This reduces the time and costs associated with cleaning and maintenance and adds to the life of assets to provide an increased return on investment (ROI).



Highly protective coatings for marine and industrial environments

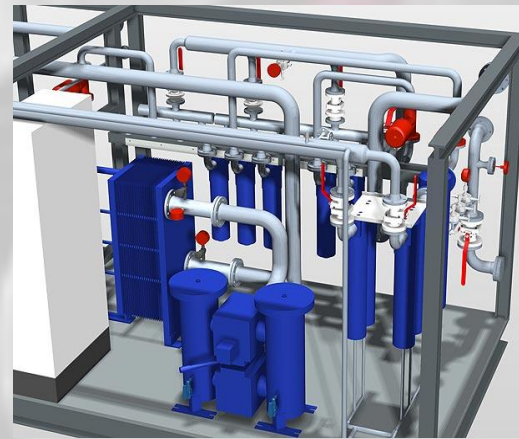
Akshaya Innotech Partners with International Leaders across Australia and Denmark with Products and coatings which provide optimal protection for surfaces subject to adverse marine environments, as well as minimize the amount of solvents and chemicals needed to clean down surfaces and equipment, reducing costs and environmental footprint.



Akshaya Innotech Marine Piping Engineering Design and Fabrication Services.

Akshaya InnoTech with expertise team on piping design planned to offer the following services.

- 1) General arrangement drawings, 3D model Piping for Piping Isometrics generation.
- 2) Pipe size calculation along thickness for piping network
- 3) Preparation of Piping material Specifications with respective international design standards like ASME B31.3, ASTMs, API, Shell DEP etc. along procurement of piping items from international vendors.
- 4) Piping stress analysis.
- 5) Preparation of advance bill of material.
- 6) Fabrication of new Piping with coating (Painting) along demolition of existing.
- 7) Quality services like Welding inspection, NDT (Radiographic, Ultrasonic, Magnetic Particle, Liquid Penetrant testing)
- 8) Pressure Test (Hydrostatic) of whole system.



| ANSI CLASS: | | 150 | | | | | | | | | |
|---|---------------|---|------------------|----------------|---------------------|---------|-------------|-------------------------------|-----------------|-----------|----------|
| MATERIAL: | | CARBON STEEL | | | | | | | | | |
| CORR. ALL: | | 1.0 mm | | | | | | | | | |
| DESIGN CODE: | | ASME B31.3 | | | | | | | | | |
| TEMPERATURE (Deg. C & PRESSURE (kg/cm ²)) RATINGS: | | | | | | | | | | | |
| TEMP: | -35 | -20 | 100 | | | | | | | | |
| PRESS: | 7.00 | 2.00 | 7.00 | | | | | | | | |
| FLANGED WATER END | | | | | | | | | | | |
| ITEM | SIZE | DESCRIPTION | | | | | | | | | |
| MAINT. JOINTS | ALL | FLANGED TO BE KEPT MINIMUM. | | | | | | | | | |
| PIPE JOINTS | ALL | BY SCOUR AND REF. NOTE 5: BUTT WELDED AS PER ANSI B16.25 | | | | | | | | | |
| DRAINS | ALL | 1" OR AS PER SHELL STD. DWS NO 4-28101-02488 | | | | | | | | | |
| VENTS | ALL | 1" OR AS PER SHELL STD. DWS NO 4-28101-02488 | | | | | | | | | |
| TEMP. COON. | M352 | INSTALLATION AS PER SHELL STD. DWS NO 4-28101-02488 | | | | | | | | | |
| PRESS. COON. | 1.2" | INSTALLATION AS PER SHELL STD. DWS NO 4-28101-02488 | | | | | | | | | |
| NOTES | | | | | | | | | | | |
| 1. ALL FLANGED VALVES ABOVE 24" SIZE SHALL HAVE FLANGED END AS PER AWWA C207 CLD. | | | | | | | | | | | |
| 2. VENT & DRAIN ISOLATION VALVES SHALL BE GATE VALVES. | | | | | | | | | | | |
| 3. WELDED PIPE SHALL HAVE ONLY CONDITIONAL WELD MADE BY EMPLOYING AUTOMATIC WELDING. | | | | | | | | | | | |
| 4. MINIMUM THICKNESS OF FITTINGS SHALL BE IN LINE WITH THE PIPE SCHEDULE OR THICKNESS. | | | | | | | | | | | |
| 5. USE BUTTERFLY VALVES INSTEAD OF GATE VALVE FROM 12" ONWARDS IN WATER SERVICE UP TO 70 DEG. CENT. BUTTERFLY VALVE SHALL BE OF PN 10 RATED W/TS OR PRESSURE OF 10 KG/CM ² . | | | | | | | | | | | |
| 6. MOW GASKET SHALL BE SELF ALIGNING TYPE WITH INNER RING OF SPIRAL STRIP MATERIAL. | | | | | | | | | | | |
| 7. FORGING RING ACCEPTABLE IN LBS OF PLATE MATERIAL FOR BLIND FLANGES AND SPACERS & RINGS. | | | | | | | | | | | |
| 8. METRIC BENDS SHOULD BE 5-PIECE FOR SIZES FROM 24" TO 36" METRIC BENDS 45 DEG SHALL BE 3-PIECE FOR SIZES FROM 24" TO 36". | | | | | | | | | | | |
| 9. NOT REQUIRMENTS AS PER SHELL STD DWS NO DT 5710. | | | | | | | | | | | |
| 10. FOR GENERAL NOTES ON PIPING & VALVES REFER STD. NO. DT 6999. | | | | | | | | | | | |
| ITEMS | TYPE | ENDS | DA. RANGE (INCH) | DRG. THO. (MM) | FACE FINISH (RADII) | QTY | DESIG. STD. | SPEC. MATERIAL (CARBON STEEL) | DESCRIPTION | QTY | NOTE |
| PIPES | WELDED PIPE | EE | 3 | 6 | HVY | 5 | 15328 | ASTM A 105 | S 1208 PART 1 | 4 | AA174152 |
| | WELDED PIPE | EE | 3 | 6 | HVY | 5 | 15329 | ASTM A 105 | S 1208 PART 1 | 3 | AA174152 |
| | WELDED PIPE | EE | 5 | 18 | TS-1 | 5 | 55569 | ASTM A 105 | S 3608 GR F4330 | 3 | 0157880 |
| | WELDED PIPE | EE | 20 | 38 | TS-1 | 5 | 55569 | ASTM A 105 | S 3608 GR F4330 | 3 | 0157880 |
| | WELDED PIPE | EE | 24 | 38 | TS-1 | 5 | 55569 | ASTM A 105 | S 3608 GR F4330 | 3 | 0157880 |
| FLANGES | BLIND | FF | 3 | 24 | 150 | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | BLIND | FF | 24 | 42 | 150 | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | BLIND | FF | 3 | 24 | 150 | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | BLIND | FF | 24 | 42 | 150 | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | BLIND | FF | 24 | 42 | 150 | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| ELBOWS & DEGS | ELBOWS 90 DEG | EW | 3 | 6 | 300 | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | ELBOWS 90 DEG | EW | 14 | 24 | M | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | ELBOWS 90 DEG | EW | 24 | 42 | M | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | MITRE 90 | EW | 24 | 42 | M | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |
| | MITRE 45 | EW | 24 | 42 | M | 155A8TH | 8 | 1615 | ASTM A 105 | AA1748101 | |





Come.. Let us Build a sustainable tomorrow



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