

In tune with time

Prem Shenoï on clean India mission

How Prem Shenoï, a pioneer acknowledged for ushering environment bioremediation in India is revolutionizing wastewater management industry with his venture, Aerobic Biotaxy India Pvt. Ltd

Diwakar Shetty

Waste water is an unavoidable byproduct of life and the living world has encompassed its own 'waste water management' solutions since its creation. Mankind, with its developments and discoveries in the arenas of health, technology, engineering and other industries has made advancements but has simultaneously left the earth down in dumps- with overburdened wastewater streams and aggressive environmental pollution. We have unbalanced the ways nature manages, reduces and reuses waste water. How, then, can we maintain an equilibrium between development and waste water management? To address this alarming concern of mounting waste mountains and the crippled polluted streams, Mr Prem Shenoï, an intuitive thought leader took notes from nature's incredible systems for managing waste and emulated nature's strategies in human designs to uncover a panacea for waste water management challenges. And this was how the vision of Aerobic Biotaxy India Pvt. Ltd. was shaped. With its well-established technologies engineered to solve the unmet needs of wastewater management, ABIL has brought in a sustainable, techno-commercially viable solution with reduced operational and faecal sludge management and costs.

ABIL's engineered Bio Remediation technology has answered most of the toxicity in disposal system created by modern living lifestyle subsequent to economic stability. ABIL caters environmental Biotechnology solutions to every corner of the world- starting from single house apartment to large commercial & Industrial complex. The organization's modular and scalable products & systems are easy to install & operate while adaptable to any site conditions like below car parking or pathways or at set



He observed the limitations of initial submerge ABGs for large-volume treatment due to hostile regimes, operational difficulty & serviceability aspects. Hence, he invented & introduced On-Surface, Sub surface ABG model called 'Genie' that can avoid the costly external dosing of bacteria to maintain the targeted bio-digestion strength as high-volume bacteria generators

aside areas. ABIL products are unique in the longevity of their functionality & continuity of their sustainability. The systems are adaptable to any existing or failed treatment plants without going in for heavy investment on machinery & other infrastructures. With the initiation of its journey back in 2012, ABIL has refined and evolved its technological expertise in wastewater treatment, adapted from Mother Nature's tools.

The man behind ABIL's spark of change- Mr Prem Shenoï

A Science graduate from Kochin, Mr Shenoï has channelized his expertise for numerous infrastructure projects like Mines, Dams, water body rejuvenation across various countries. He has also worked for international trade agreements and assisted heads of many businesses to revive their operations. In most part of his life, he was a globetrotter. He brought Environment Bioremediation in India by incorporating Aerobic Biotaxy India Pvt. Ltd. in association with Dr Daniel Wickham & Mr Curtis Ashbeck. He is renowned in customizing the Aerobic Treatment Process for Indian horizon. Mr Shenoï has been instrumental in providing new dimensions to ABG (Aerobic Bacteria Generators). He observed the limitations of initial submerge ABGs for large-volume treatment due to hostile regimes, operational difficulty & serviceability aspects. Hence, he invented & introduced On-Surface, Sub surface ABG model called 'Genie' that can avoid the costly external dosing of bacteria to maintain the targeted bio-digestion strength as high-volume bacteria generators.

A key component, aeration holds a vital position in the bioremediation to provide necessary energy & accelerate the degradation of organic wastes by microorganisms. Another state-of-art technology, Pressure Balanced OCTOPUS™ Oxygenators, patented by Mr





Shenoi, are fine bubble diffuser, suitable for waste water treatment, create an oxygen-rich foam environment in its core because water generally holds mere 7-9mg/l oxygen. Encouraged by the sustainable bio-digestion of sewage & solid waste, Mr Prem Shenoi expanded the aerobic bioremediation process to various challenging fields by conducting various successful trials for industrial effluents like Nicotine digestion at ITC Ltd. Bangalore (The bioremediation of 100% nicotine has been patented by Mr Shenoi), Milk Dairy, Tannery, etc.

ABIL: an innovative solution for the mammoth waste management concern in India

Headquartered at Bangalore, ABIL has established itself as a multinational environmental biotechnology frontrunner on the Indian landscape by successfully creating a blend of environmental biology and technology to process domestic & industrial waste, wastewater management and resolving environmental pollution problems. Spearheading as a debit-free organically grown leader, the frontrunner has come up with its own Aerobic Bacteria Generators and its improved version design and new products are constantly diversified in respect to the easier operation and cost-cutting by keeping its customers in focus. ABIL uses sound scientific

novel bio-remediation technology to digest all pollutants (Sludge) whatever the complex forms they are and breaks them back into natural elements. The company is in the possession of eleven patents (filed) under this technology and seven are in the process of filing. Furthermore the organization has entered in multiple Memorandum of Understanding with International leaders including Biocon Ltd, Leidos Plc USA, Emerson Plc USA, Sludge hammer group Plc USA and many others across the domain to share the technology and component development. Known for its advanced products of Aerators, Diffusers and Bacteria growth media which are manufactured 100% in India. ABIL is equipped with twenty-five energetic professional from microbiology, mechanical engineering, MBA marketing polytechnics to execute, support & service the work at ABIL. The entire team is of environment enthusiasts who are full of energy & passion in all what they do.

AIBL's Sustainable Smart Waste Water Treatment Technology (SSWTT)

ABIL's next gen technology, Sustainable Smart Waste Water Treatment has been developed as a new age application of Artificial intelligence based automation of waste water treatment system. It will add value to the organization by optimizing Data for operating efficiencies, maintenance, plus consumer use and

extracting human health information insights over health deficiencies and illness, quantity and quality reusable resources to accelerate sewerage economy. Additionally, it leads the pathway to smart cities architecture by monitoring qualities of sewage, sewer, sewerage system, health indicators, and detecting needs for up-gradations, design modifications, maintenance and repair throughout the system for a sustainable futuristic Smart Sewerage Economy. To implement this technology, ABIL is currently working on its first project in Bangalore.

Waste Digester

ABIL's another dream project; Waste Digester holds prowess in the complete elimination of garbage waste land fill (size: 1x3m) comprising of wet & smelling garbage food waste vegetable and kitchen waste etc of approx 30 houses. In the timeframe of 5 hours, the Waste Digester will convert the waste into an odorless dry powder composite, containing agriculture value. A revolutionary project, the machine will successfully convert the mounds of garbage with 100 % saving on removal, transportation and landfills with free from smell and diseases.

Building a better world and moving forward with Disruptive Technology

Adhering to its principals, ABIL is successfully crafting a niche for itself with three-fold growth and satisfying

its clientele, including a host of CDP, Platinum 8 and Fortune 500 companies. ABIL's bioremediation speaks for the uniqueness of the company. It stands ahead of the technologies like SBR, MBBR, RBC, and MBR that extract water from the waste and leave the residue behind, without any treatment. The organization's successfully installed 70 plus Sludge & Odor Free (SOF) plants in & out of Karnataka has treated more than 2 billion liters of wastewater as on

Chairman, and KSPCB. Further on his advice, bioremediation of solid wastes was also conducted in various locations including Sunrise Company to prove the organization's biotechnology prowess. The company has been acknowledged with special approval from BBMP (Bangalore Bruhat Mahanagar Palike) jointly with KSPCB for bioremediation of dilapidated Lakes and the results were demonstrated as most desirable. The organization also conducted various tri-

continuous flow experiment for 3 weeks at Quality Glues, Ambur and achieved the best solutions to this challenging field.

■ These successful Field trials illustrate the wide spectrum of ABIL's bioremediation proficiency and the company is focusing at the wide scope to contribute effectively, economically to resolve today's industrial conflicts facing with ecosystems.

its clientele, including a host of CDP, Platinum8 and Fortune 500 companies. ABIL's bioremediation speaks for the uniqueness of the company. It stands ahead of the technologies like SBR, MBBR, RBC, and MBR that extract water from the waste and leave the residue behind, without any treatment. The organization's successfully installed 70plus Sludge & Odor Free (SOF) plants in & out of Karnataka has treated more than 2 billion liters of wastewater as on today with no chemicals, pathogens, toxic gases that pollute the water, soil & other ecosystems.

Adding Values to Customers

With its focus over delivering core capabilities like LEED (Leadership in Energy and Environment Design), Zero Discharge and Net Zero Energy (NZE) through its robust products, ABIL is looking ahead to drive targets and keep the organization's growth vigorous, nurtured by corporate ethics & professionalism. ABIL is looking to appoint high calibre with integrity reliability & commitment from similar fields to take this challenge.

Field Trials to leap forward...

The Aerobic Bio remediation's trials and claims have been verified under the analysis of Dr Vamanachrya, Former

Chairman, and KSPCB. Further on his advice, bioremediation of solid wastes was also conducted in various locations including Sunrise Company to prove the organization's biotechnology prowess. The company has been acknowledged with special approval from BBMP (Bangalore BruhatMahanagarPalike) jointly with KSPCB for bioremediation of dilapidated Lakes and the results were demonstrated as most desirable. The organization also conducted various trials for industrial effluents which have been outlined below:

- Nicotine digester at ITC Ltd factory premises at Bangalore- ABIL was successful in 100% nicotine digestion and the patent for this innovative technique has been filed.

- Milk Dairy waste digester- ABIL presented a successful demonstration of biotechnology solution for waste dairy water at KMF.

- Further trials were also conducted on bioremediation at ITC Tech Park for sewage and the results were beyond satisfaction level. Currently, the organization's Ammonia Digestion is in progress.

- The bioremediation trials at Kingfisher breweries, Nelamangala also exhibited the success of the technology in degrading brewery waste.

- Tannery & animal glue waste digestion trials were conducted through

continuous flow experiment for 3 weeks at Quality Glues, Ambur and achieved the best solutions to this challenging field.

- These successful Field trials illustrate the wide spectrum of ABIL's bioremediation proficiency and the company is focusing at the wide scope to contribute effectively, economically to resolve today's industrial conflicts facing with ecosystems.

ABIL's Chronoscope

- 25 Oct 2013 - Firstever field trial was conducted at Ecospace Tech Park, Waste water treatments by curtesy of Mr. Kupandra Reddy, Member of Parliament, was the first step of success towards WWT using engineered Bioremediation

- 09 Dec 2013- Installation of FIRST Sludge & Odor Free (SOF) Aerobic Treatment Plant (ATP) for SK Iris Apartments, at Hormavu, Bangalore

- 11 Dec 2013- ABIL got its "Octopus" fine bubble aerators patented and exported the first batch to the USA

- ABIL created a landmark of treating 1.0 Million Litres of wastewater into clear water through successful Aerobic Bioremediation without using any filtration process or chemicals.

- 5 March 2014- ABIL signed an agreement with Emerson Inc. The USA, towards resolving solid waste treatment



from kitchens & restaurants in India through their world class in-Sinkerator products.

- 12 May 2014- Dr Dan & Mr Curtis joined ABIL as shareholders & Directors thus, directly bridging Sludge Hammer and basic technology transfer from USA to India.

- 31 MAY, 2014- ABIL got recognized for supporting Rotary BSE-SME and achieved National Awards for Excellency.

- 8 Oct 2015- ABIL introduced bioremediation solutions to the Hotel Sunkarant, Le Memelle, (SVC group)

Young mind pushing for cleaner India

Harsshal L Reddy, simple girl with an extra ordinary vision.

Harsshal Reddy is a Associate Vice President (Marketing) at Amic Digester, one of India's fastest growing biotech

from kitchens & restaurants in India through their world class in-Sinkerator products.

■ 12 May 2014- Dr Dan & Mr Curtis joined ABIL as shareholders & Directors thus, directly bridging Sludge Hammer and basic technology transfer from USA to India.

■ 31 MAY, 2014- ABIL got recognized for supporting Rotary BSE-SME and achieved National Awards for Excellency.

■ 8 Oct 2015- ABIL introduced bioremediation solutions to the Hotel & restaurant- La Marvella, (SVG group), to leap to Shopping Malls & Technoparks where the ETPs have effluents that were very complex in nature due to fat, oils, grease, massage lotions, laundry waters.

■ 12 Aug 2017- ABIL crossed another milestone of treating 1.0 Billion litres of wastewaters at daily recycling of 1.75MLD through its over 50 SOF (sludge & Odor Free) plants.

ABIL has successfully commissioned plants ranging to 100-250 KLD capacities.

Creating an engineered environment for future- ABIL's Research & Development Dexterity

ABIL has initiated an in-house Research & Development (R&D) centre to define & deliver products which can sustain functionality & continuity in the field of ever challenging industrial effluents. A multi-pronged approach is planned to turn R&D into a profit centre to generate Rs.10 -50M initial years with a growth rate of 100% annually. The organization is in process of building a full-fledged R&D centre spanning 1000-2000 sq. m. for 400 research analytic and support staff to develop bio-solution targeting customer specific product waste.

Journey Ahead

Speaking of the future plans, Mr Shenoel elucidates, "The market is wide open with 360 degrees opportunity at present. In all the available technology clients have to place huge investment & needless stress to maintain regulatory standards. But our disruptive technology has already endowed us to easily surpass these limits and has established our niche in terms of operation, maintenance, durability, functionality & continuity."

Exports

ABIL is watching out a quantum leap in its exports with an expected rise to INR 20M in next fiscal period from current's INR 3M. The organization's core products are harnessed across the globe, including PAN India. ABIL is also planning to explore North America, Europe, and Chinese mainland through SludgeHammer group. The organization is expecting a turnover of Rs.50M from its Bangalore unit and more stems including, Delhi NCR, Mumbai, Navi Mumbai, Goa, Pune, Amaravati (AP), Hyderabad, Kochin, Chennai. With the stabilized process, seamless technology and successful products dedicated to customers' needs, ABIL is on its way of scaling its revenue to the mark of Rs.2000M in 2019-20 with a conservative addition of Rs. 500M via other revenues like maintenance & large contracts and with the building of infrastructure, logistics & trained manpower.

Team ABIL have visionaries namely Dr Daniel Wickham PhD - Chairman & Chief Scientist, Curtis Robert Ashbeck- Director & Chief of Operations, TN Dinesh Kumar- Founder Director & Chief of Technical Service

Young mind pushing for cleaner India

Harsshal L Reddy, simple girl with an extra ordinary vision.

Harsshal Reddy is a Associate Vice President (Marketing) at Aerobic Biotaxy, one of India's fastest growing biotechnology firms, headquarters at Bengaluru, KA, India. She is a graduate in international business Amity University Noida India. She choose to work towards a better safer and hygienic, Clean India. (Contributing towards SWACH BHARAT MISSION)

Harsshal works towards management of treating toxic waste water of sewages or industrial wastes with the help of aerobic bacteria to make water suitable for re-use, leaving behind No extracted solid wastes or pathogens. Harsshal says "I began my research in the subject from my second year at University. I also presented this topic in one of my business conference in the year 2015". The area of conservation, protecting, treating and giving back to the environment has always been of keen interest. This was once such opportunity, where my heart was at the right space, the right time.

Time and again I researched and developed in getting the word out about the industry and it's technology. One such incident that made me realise that waste water treatment and its prevention is a necessity ...when I was walking back from my university building to my hostel block and had to cross by this open treatment plant within campus. There was one area where most of the students had to cross everyday at university campus. And would hold their breath to cross by this area and this was when I realise that this is a sewage play of one of the hostel blocks that is an open treatment plant and most of the times there was water overflowing from these treatment plants.

I believe that the times coincided with one of my experiences of staying in a hostel and to come across aerobic biotaxy as this platform providing efficient sewage treatment or any effluent treatment plant (one of its kind in India) with at most design to suit its technology, with complete treatment leaving behind no sludge and no waste water out for human exposure either by air, moisture or mist, or also by any physical movement and human handling of the physical sludge.

The modernization and Urbanization of human lifestyle has resulted in a much more Complex system of wastes generated. For example-be a personal care, soaps -shampoos, pharmaceuticals, kitchen wastes, home improvement waters, oil spills, Industrial water based waste, hospital waste, airports waste, etc.

Thus resulting in much more complex situation on the ground where in million of tones of sewage is to be treated on daily basis. India is a growing country both in terms of the population and industrial use. The municipal corporations of the cities are saturated with funds and resources so a private participation is desperately required to meet the challenge. Aerobic biotaxy is one platform that has all round solution to treating any complex effluents.

