



SPARKLE CLEAN TECH PVT. LTD.

*Always moving forward...*

(An ISO 9001 Certified Company)



**WE PROVIDE SUSTAINABLE  
WATER MANAGEMENT SOLUTIONS**

# About Us



If its WATER, it's at SPARKLE

*Providing Water Solutions to Commercial, Industrial, Government, Oil & Gas Sectors*

Sparkle Clean Tech Pvt. Ltd. provides the best solutions for treating the toughest waters at the most economical operational cost. Committed to the “Last Drop Concept” theory of saving the optimum quantity of water while treating, Sparkle offers maximum value for money and stands by its solemn pledge to build a better world of pure water.

Sparkle is one of the fastest growing water treatment companies of Asia. Apart from India, it has executed projects in Indonesia, Philippines, Singapore, UAE, West Africa, Italy and USA. With more than 750 projects in a short span of 9 years. Sparkle continues to offer expertise and innovations in design consultation, pilot plant trials, equipment sales and after sales services to the customers

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Sparkle aims to conserve and optimally utilize water resources. It takes this issue as a serious challenge and continuously strives to fulfill its clients' expectations to the fullest. Conservation of water resources is indeed the need of the hour and therefore, Sparkle is sincerely dedicated to the cause of this social responsibility.

Sparkle encourages an open flow of communication with the water experts of the world, so that the scientists around the world can come together and address the serious problem the world is facing: Water...

”

Regards,  
Sumeet Mehra



## Mission

Excellence in the Water Filtration Technology



## Vision

India's Largest Water Filtration Company - A cost effective quality corporation that stands behind our Technology and Integrity. We offer the best quality water filtration for the money our clients spend, and we back our supreme technology with a distinct mind set of exceptional service and satisfaction.



NO NATURAL RESOURCE ON **EARTH** IS MORE  
VITAL FOR SURVIVAL THAN **CLEAN WATER**

OVER  
**750 PROJECTS**  
WITHIN A SHORT SPAN OF  
**09 YEARS**

PRESENCE IN  
ASIA, AFRICA,  
EUROPE &  
AMERICA

**HIGHLY EXPERIENCED**  
TEAM WITH MEMBERS HOLDING  
**HIGH EXPERTISE** IN THE FIELD.

**SPARKLE CLEAN TECH PVT. LTD.** WAS FOUNDED ON THE IDEA THAT  
IT IS **IMPORTANT** FOR **CONSUMERS** AROUND THE **WORLD** TO  
HAVE **SUSTAINABLE** ACCESS TO **AFFORDABLE CLEAN WATER**

**STATE-OF-THE-ART WATER-**  
**TESTING** AND R&D LABORATORY

SAVING MORE THAN **6.76 BILLION**  
**GALLONS** OF WATER ON **ANNUAL**  
BASIS.

**HIGH PERCENTAGE OF REPEAT BUSINESS**

**WIDE SPREAD OF TECH-**  
**NOLOGY** IN THE INDUSTRY.

FROM **DESIGNING** TO  
**INSTALLATION** OF PLANTS

**SOLVING THE TOUGHEST**  
**WATER CHALLENGE**

KEY TECHNOLOGIES	SECTORS	SOLUTIONS
DEPTH FILTRATION ION EXCHANGE RO PLANT	COMMERCIAL INDUSTRIAL GOVERNMENT OIL & GAS	WATER MANAGEMENT WASTE WATER MANAGEMENT DRINKING WATER ZERO LIQUID DISCHARGE WATER MANAGEMENT FOR OIL & GAS

**WE CONSTANTLY STRIVE TO EXPLORE NEW TECHNOLOGIES  
THAT ARE COST EFFECTIVE, AND EASY TO OPERATE & MAINTAIN**

# Our Solutions | Water Treatment



Every Drop Counts.....

We, at Sparkle, provide complete and comprehensive water-purification solutions for treating raw/fresh water bodies and sources.

We offer wide range of technologies as well as the combinations of the same to remove physical, bacterial, inorganic dissolved solids and other impurities from water at the most reasonable rates.

## Technology & Products |

### Depth Filtration:

- Pressure Sand Filter
- Activated Carbon Filter
- Iron Removal Filter
- Multigrade Filtration

### Disinfection:

- Dosing
- Ultra Violet System
- Ozonator

### Micro/Membrane Filtration:

- Micron Cartridge Filter
- Ultra-Filtration

### Ion Exchange:

- Softner
- D. M. Plant - 2 bed
- D. M. Plant - 3 bed
- Standalone Mixed bed

### Others:

- Degasser
- Nano Filtration
- EDI

### RO Plant:

- RO

# Waste Water Treatment

## Retrieving the Last Drop.....

We, at Sparkle, provide potent solutions for purifying waste-water, domestic and diverse industrial contaminations. While doing so, we ensure that the maximum amount of water is treated to the level of being reused. Waste-water can be classified into two types: Sewage waste-water and Effluent waste-water.



For the treatment of waste-water, the essential steps such as laboratory-trial, pilot-trial, jar-test, etc are carried out at the State-Of-The-Art In-House Laboratory at the Sparkle factory located at Khopoli, Navi Mumbai.

The trial and its result enables Sparkle to design the most effective solutions for the waste-water treatment. At Sparkle, we believe in the LAST DROP CONCEPT. By selecting the technology that facilitates the optimum recycle and reuse of waste water, we ensure that the waste generated out of the treatment is the least minimum.

## Technology & Products |

### Anaerobic Process:

Anaerobic Reactor

### Aerobic Process:

Sequential Batch Reactor

Activated Sludge Process

Membrane Bio Reactor

### Tertiary Treatment:

Pressure Sand Filter

Activated Carbon Filter

Iron Removal Filter

Multigrade Filtration

Dosing

Ultra Violet System

Ozonator



# Water Management for Oil & Gas



## Elements Matter.....

Sparkle has been instrumental in tackling the challenge of converting oil-rich effluent to the state of making water reinjectable. Reinjection of water enhances the process of oil-extraction. Since water is generally reinjected very deep into the earth, it has to be ensured that water is free of contamination in that process.

Specific applications like removal of oil from oil rich effluent are carried out by using technologies like induced gas flotation, dissolved air flotation, walnut-shell filters and special type of ultrafiltration widely used for treating the effluent of oil fields.

## Technology & Products |

### Setting / Coagulation / Flocculation:

- Dissolved Air Flotation ( DAF )
- Cleri - flocculation
- Tube / Plate Separation

### Filtration:

- Nut Shell Filter
- Ultra Filtration

### Oil Separation:

- Corrugated Plate Intersected ( CPI )
- Inducted Gas Flotation ( IGF )
- Oil Skimmer



# Zero Liquid Discharge

## Purity Par Excellence.....

As per the stringent pollution control norms specified by the government authorities in view of the depleting water sources, Zero Liquid Discharge is gaining an unprecedented importance in the industry. With a good number of installations and the strong belief in the Last-Drop Concept, Sparkle has acquired proficiency in providing effective ZLD



Sparkle ZLD system equipment is designed in such a way that it ensures easy to operate, control and install mechanism.

## Technology & Products |

### Depth Filtration:

- Pressure Sand Filter
- Activated Carbon Filter
- Iron Removal Filter
- Multigrade Filtration

### Disinfection:

- Dosing
- Ultra Violet System
- Ozonator

### Micro/Membrane Filtration:

- Micron Cartridge Filter
- Ultra-Filtration

### Ion Exchange:

- Softner
- D. M. Plant - 2 bed
- D. M. Plant - 3 bed
- Standalone Mixed bed

### RO Plant:

- RO

### Others:

- Degasser
- Nano Filtration
- EDI

### Anaerobic Process:

- Anaerobic Reactor

### Aerobic Process:

- Sequential Batch Reactor
- Activated Sludge Process
- Membrane Bio Reactor

# Drinking Water



## Sparkling Liquids .....

Sparkle has taken the onus of providing safe, potable water to India.

We have over 20 installations to remove fluoride from water in the state of Maharashtra. All the installations are placed in the village schools of the State. Sparkle has also provided the supply of domestic water to townships.

With the best combinations of the available technologies, Sparkle ensures zero passage of contaminants in potable water.

## Technology & Products |

### Depth Filtration:

- Pressure Sand Filter
- Activated Carbon Filter
- Iron Removal Filter
- Multigrade Filtration

### Micro / Membrane Filtration:

- Micron Cartridge Filter
- Ultra-Filtration

### RO:

- RO Plant

### Others :

- Degasser
- Nano Filtration
- Ultra Violet System
- Ozonator
- EDI

## Beyond The Basics.....

Some of the other solutions, Sparkle provides are:

- Sea-water Desalination.
- High Purity Water for injections, semi-conductor, industry, pharmaceuticals, power-boiler feed.
- Reverse Osmosis plants for dialysis.
- Fluoride, Arsenic, Iron and Heavy Metal Removal.
- Nano filtration for higher sulphates in waste water.



Further to above applications, Sparkle has installed the highest number of polishing Ultra Filtration systems.

## Technology & Products |

### Depth Filtration:

Pressure Sand Filter  
Activated Carbon Filter  
Iron Removal Filter  
Multigrade Filtration

### Micro/Membrane Filtration:

Micron Cartridge Filter  
Ultra-Filtration

### RO Plant:

RO

### Others:

Degasser  
Nano Filtration  
Ultra Violet System  
Ozonator  
EDI

### Setting / Coagulation / Flocculation:

Dissolved Air Flotation (DAF)  
Cleri - flocculation  
Tube / Plate Separation

### Oil Separation:

Corrugulated Plate Intersected (CPI)  
Inducted Gas Flotation (IGF)  
Oil Skimmer

### Filtration:

Nut Shell Filter  
Ultra Filtration



# Technologies



## Depth Filtration

Depth filters are the variety of filters that use a porous filtration medium to retain particles throughout the medium, rather than just on the surface of it. These filters are commonly used when the water to be filtered contains a load of particles because, in comparison to the other types of filters, they can retain a large mass of particles before becoming clogged.

### Products

Pressure & Sand Filter | Activated Carbon Filter | Iron Removal Filter | Multigrade Filtration

## Micron / Membrane Filtration

Micron filtration is to segregate or separate particulate matter based on its size. Sewing, screening or surface filtration are also the types of surface filtration based on size of the particulate matter. When the requirement of filtration is less than 0.2 microns, then membrane filtration is also used. In water and waste water treatment, this type of filters are essential.

### Products

Micron Cartridge Filter | Ultra FiltrationIron



## Membrane Bio Reactor ( MBR )

Membrane Bio Reactor (MBR) is a combination of two basic processes i.e. biological degradation and membrane separation. They are merged into a single process where suspended solids and microorganisms responsible for biodegradation are separated from the treated water by membrane filtration unit.

### Products

Membrane Bio Reactor - MBR

## Ion Exchange

Ion exchange is a resin based process, the inner beds of resin carry either positive or negative ion which can be exchanged with the ion of incoming water. The dissolved salt or solids comprising of positive or negative ions are passed through cation and anion resins to achieve desired results.

## Products

Softener | Two Bed Demineralisation | Three Bed Demineralisation | Standalone Mixed Bed



## Nano / RO Plant

Osmosis is defined as a process where water with low concentration, passes through a semi permeable membrane and forms an equilibrium with water of higher concentration available on the other side of the membrane. The pressure at which this phenomenon takes place is called Osmotic Pressure. For purification of water, the phenomenon is reversed i.e., pressure higher than osmotic pressure is applied to the concentrated liquid which will pass through a semi permeable membrane resulting into a purer form of water/liquid.

## Products

Nano Plant | RO Plant



# Technologies



## Setting / Coagulation / Flocculation

Coagulation is used in water treatment processes for separation of free oil, solids removal, water clarification, lime softening, sludge thickening, and solids dewatering. The negative electrical charge on particles are neutralized, which destabilizes the forces keeping colloids apart.

## Products

High Rate Solid Contact Clarifier (HRSCC) | Dissolved Air Flotation (DAF) | Clari-Flocculation | Tube/Plate Separation

## Oil Separation

As a special treatment for oil removal from oil rich effluent additional equipment are employed. The conventional treatment like coagulation / flocculation becomes the primary treatment for oil rich effluent. TPI / CPI , followed by IGF / Dissolved Air Flotation are installed to treat emulsified oil. The above water is then treated in a Walnut shell filter which reduces the oil content effluent to around 10ppm.

## Products

Oil Skimmer | Dissolved Air Flotation (DAF)



## Activated Sludge Process

The activated sludge process is a process for treating sewage and industrial wastewaters using air and a biological floc composed of bacteria and protozoa.

## Products

Extended Aeration | Sequential Batch Reactor - SBR





## Attached Growth Process

Wastewater treatment processes in which the microorganisms and bacteria treating the wastes are attached to the media in the reactor. The wastes being treated flow over the media. Trickling filters and rotating biological contactors are attached growth reactors. These reactors can be used for BOD removal, nitrification and denitrification.



## Products

Submerged Aerated Fixed Film Bio Reactor - SAFF |  
Moving Bed Bioreactor - MBBR




## Others

Various other technologies are used in water management and treatment. For instance, Degasser tower breaks weak carbonic acid into carbon dioxide and water. Degassed tower is considered in a DM water system or in De Alkalizing system when the alkalinity in the water is very high and the pay back of Degasser tower is favorable.

## Products

Degasser | Nano Filtration | Ultra Violet System |  
Ozonator | EDI

# Product Range



Water Is The Elixir Of Life

## Ion Exchange

- Softener
- Two Bed Demineralisation
- Three Bed Demineralisation
- Standalone Mixed Bed

## Setting / Coagulation / Flocculation

- High Rate Solid Contact Clarifier (HRSCC)
- Dissolved Air Flotation (DAF)
- Clari - Flocculation
- Tube/Plate Separation

## Oil Separation

- Corrugulated Plate Intersected (CPI)
- Inducted Gas Flotation (IGF)
- Nut Shell Filter (NSF)
- Oil Skimmer

## Depth Filtration

- Pressure & Sand Filter
- Activated Carbon Filter
- Iron Removal Filter
- Multigrade Filtration

## Micro / Membrane Filtration

- Micron Cartridge Filter
- Ultra Filtration

## RO

- RO Plant

## Activated Sludge Process

- Extended Aeration
- Sequential Batch Reactor (SBR)

## Attached Growth Process

- Submerged Aerated Fixed Film (SAFF)
- Moving Bed Bioreactor (MBBR)


## Membrane Bioreactor

- Membrane Bio Reactor (MBR)

## Others

- Degasser
- Nano Filtration
- Ultra Violet System
- Ozonator
- EDI





## Commercial & Industrial

### Commercial |

Sparkle has established itself as one of the most recognized and prominent firms in the world of water treatment business for commercial sectors like:

- ✓ Community Parks
- ✓ Multiplexes
- ✓ Recreation Centers & Clubs
- ✓ Swimming Pools
- ✓ Townships
- ✓ Health & Education
- ✓ Hospitality
- ✓ Construction
- ✓ Urban Development

### Industrial |

Sparkle's Industrial water / waste water treatment plants have been successfully installed in various industries like:

- ✓ Oil & Energy
- ✓ Paper Mill
- ✓ Automobile
- ✓ Chemicals
- ✓ Foods & Beverage
- ✓ Pharmaceutical
- ✓ Power
- ✓ Shipping
- ✓ Textile



# Sectors We Serve



## Government |

Sparkle with its most experienced, expert team of personnel designs, manufactures and installs high quality Water Treatment Plants, keeping in mind the needs of government sectors.

- ✓ Educational Institutions
- ✓ Municipalities
- ✓ Towns
- ✓ Villages
- ✓ Military
- ✓ Civil Aviation
- ✓ Railways
- ✓ Road Ways
- ✓ Oil & Energy
- ✓ Shipping

## Oil & Gas |

Sparkle recognizes the importance of Oil & Gas industry and has been serving some of the largest global oil and gas companies in meeting their water treatment and waste water treatment requirement.

- ✓ Oil & Gas



**Introduction** | Sparkle Clean Tech Pvt Ltd. has designed, supplied, commissioned 400 KLD Effluent Treatment using Membrane Bio Reactor and Reverse Osmosis process for a malt processing industry.

**Challenge** | To produce reusable treated water from primary treated effluent of Malt Industry.

**Solution Offered** | To achieve results compatible to RO feed water, Membrane Bio Reactor process was employed. After the reduction of COD, BOD and suspended impurities (from MBR) the water was fed to Reverse Osmosis System. The water was recycled to be used for the process and boiler feed. Reject was then feed to multiple effect evaporator (supplied by third party).

**Results Achieved** | The product water after MBR

- Free from organic pollutants & suspended solids
- Turbidity < 0.1 NTU
- 98% reduction in BOD

The product water after Reverse Osmosis

- Free from colour
- Recovery 80%
- TDS less than 150 mg/l

**Benefits To Client** |

- Restricts pollution and saves environment.
- High purity treated water being used for various applications
- Reduction in freshwater intake leading to cost savings
- Fully automatic system with minimum manual intervention
- Maximum recovery with minimal discharge
- Small footprint saved area is used for other utilities
- Low/ minimum sludge production
- No foul smell/ odor



# Case Study



**Introduction** | Asia's leading oil and gas exploration and production company.

**Challenge** | The client was faced with a tough problem of disposal of oily water mixture left after oil extraction. Disposal on to surface was leading to infertility and associated soil related problems.

While exploring oil lot of water is also pumped out of the oil well. this water is contaminated with oil & other impurities. Treating this water and bringing it to the level of discharge.

**Solution Offered** | The oily water mixture coming out of the heater treater was to be given a residence time of 72 hrs. This water was then to be processed in a Tilted Plate Interceptor followed – Induced Gas Flootation followed by Walnut Shell Filter and finally in an Ultra-Filtration system. The outlet from the ETP is processed in 4 stage process as given above with each stage catering to step reduction of the impurity load like course Suspended impurities, Oil skimming, fine impurities, residual oil and final polishing is carried out. The final Ultra Filtered quality is less than 10 ppm having particle size  $\leq 2$  microns.

**Results Achieved** | The treated water is

- Flow – Upto 5 MLD
- Turbidity < 3 Nephelometric Turbidity Units
- Free Oil < 10 parts per million
- Total Suspended Solids < 10 parts per million

**Benefits To Client** |

- Treated water well within the safe limits as prescribed in the reinjection water standards
- Reduction in volumes and associated fresh water costs
- Maintenance of underground pressures for better yield
- Higher flux because of better membrane selection and thus lower capital costs
- Superior membrane quality leading to lower operating cost of the UF system





**Introduction |** A company operating in the utility industry, offering services ranging from product manufacturing to project execution, construction and engineering procurement construction (EPC) Contracts.

**Challenge |** For pre-commissioning of power plant, there was a huge requirement of very high purity water. The customer wanted a solution for a plant that would serve as an interim arrangement, which can be mobile as they could not commission the main DM plant.

**Solution Offered |** The challenge was to give a plant which can be easily transported on a trailer. The plant of a 40m<sup>3</sup> /hr capacity had to be accommodated in a very compact space. Raw water pump discharge was given to an automatic dis filter. The filtered water was fed to RO by a high-pressure pump. The permeate of the RO was then fed to the degasser for removal of weak acids. The degassed water was treated in mixed bed to achieve a quality of less than 1 micron of DM water and ph of 6.5 to 7.2.

### Results Achieved |

- Flow – 40 m<sup>3</sup>/hr
- Ph – 6.5 to 7.2
- TDS – less than 1

### Benefits To Client |

- A mobile plant for ease in transportation
- High purity water being used for pre-commissioning of power plant
- The plant was moved to different locations where the pre-commissioning was done

# Our Reach



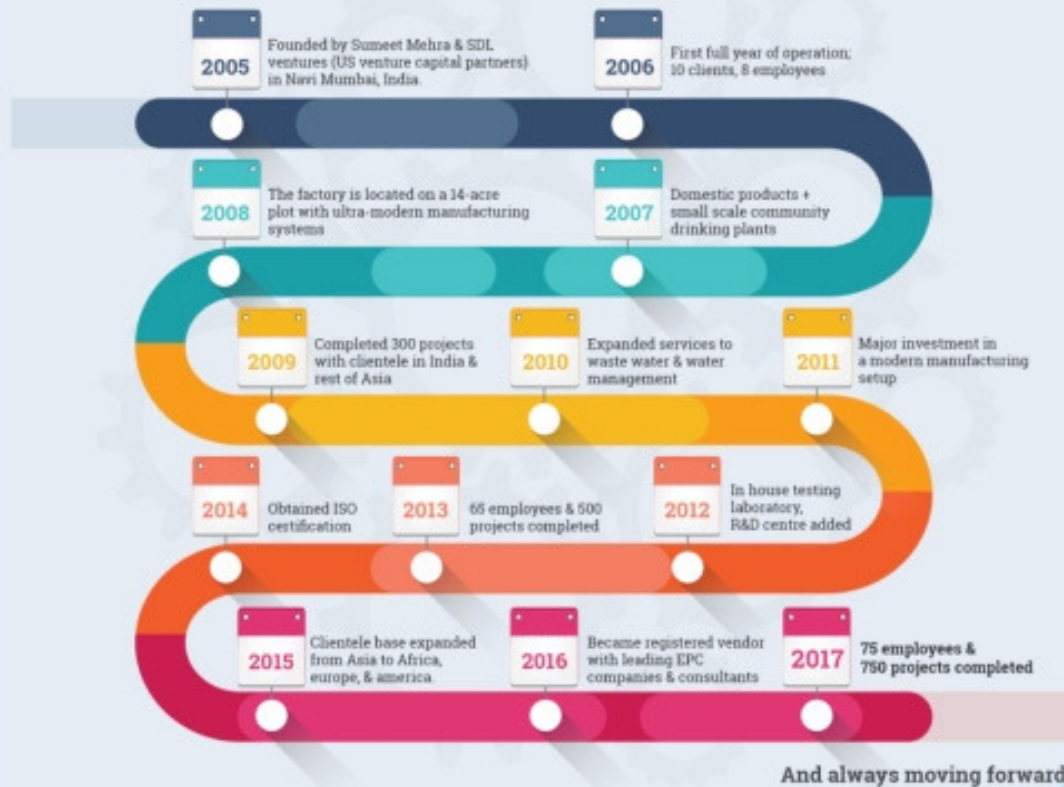
Sparkle Clean Tech Pvt Ltd. offers end to end water treatment solutions across the globe. We intend to reach the ends of the earth, geographically as well as in depth within each community we serve.

Our office locations in India, Singapore, and Philippines add to our overall capabilities to offer customized research solutions irrespective of the location where our clients are based and the kind of water management solution they wish to explore. With such a phenomenal expertise in the field, we have served more than 750 projects worldwide.



# And The Journey Continues..

## Our Story: 11 Years of Excellence



11 years of fulfilling experience, a dynamic team of 75 employees, 750 projects successfully executed, we move ahead with the feelings of gratitude and pride to build a world of water with purity par excellence.

follow us: [www.facebook.com/SparkleCleanTech](https://www.facebook.com/SparkleCleanTech) | [www.linkedin.com/company/Sparkle-Clean-Tech](https://www.linkedin.com/company/Sparkle-Clean-Tech)



If there is magic on this planet,  
it is contained in Water



**India:**

# 89 Gautam Complex,  
Sector 11 CBD Belapur,  
Navi Mumbai, India - 400614

**Singapore:**

#13-01, City House,  
36 Robinson Road,  
Singapore - 068877

**Philippines:**

Under Registration

**India Manufacturing:**

Co Subhash Silk Mills Ltd,  
Khopoli Pen Highway,  
Sajgaon - 410203