Celebrating
25+ years of Success

ENGINEERING EVERY DROP

GULF WATER TREATMENT CO. LTD.
WHO WE ARE

Established in the Year 1992 in The United Arab Emirates as a small desalination system provider and emerged as a Technology driven company with services and solutions for all aspects of water, from traditional chemical treatment to most hazardous industrial effluent treatment. With over 2000 units across the region, GWT engineers have proficiency in wide range of technology.

GWT has been repeatedly recognized for providing innovative solutions in all sorts of water treatment system. The Group has provided solutions to a wide range of clients that include Industrial companies, Hotels, Resorts, Municipalities and Communities, Construction Companies, Hospitals, and Utilities such as Power Corporations. Indicative of its long term record of success is the total installed capacity of units which exceeds 100,000 m3 per day.

GWT is a mission-driven organization with clearly defined set of values and principles. We encourage our employees to have a strong sense of purpose, and a high level of self-esteem. We strongly believe that competitive advantage is largely in the minds of our employees as represented by their capacity to turn rational ideas into actions towards the accomplishment of our mission. AWT is empowered with the latest technology and most importantly expert professionals who have been successfully able to bring out cost effective solutions.

THE POLICY

The policy of GWT is to deliver and maintain a high standard of quality in every area of its slightest involvement and to persistently satisfy the expectations of every client.

Our People

There is no doubt that our success is built from our employees who have been successfully able to bring out and deliver cost effective solutions in the field of water and waste water treatment. Our In-house professionals carry unparallel qualification, gained through years of experience, whose credential and wealth of experience are nothing less than leading edge.

As a Technology provider, our greatest asset are the individuals who work for us. Our approach to recruiting and retaining staff has culminated in an employer / employee relationship unlike many others within our industry.

Leveraging the collective skills of experienced chemical, civil, environmental, electrical, mechanical and process engineers, chemists, and skilled tradesmen, GWT blends a culture of teamwork, commitment and passion to help solve your unique water treatment needs.

Our System

Our commitment to excellence is just one aspect of our success. What sets GWT apart on a practical level is complete control over every aspect of business from sales to project delivery. The back office of our Sales and Marketing department ensures that every aspect of product supply, from order through to delivery, runs smoothly and as per the commitment of the sales department. Our approach is based on an established and successful methodology that addresses the needs of the project throughout its life cycle from inception through to timely completion and handover. Any issue or problems arising during the course of supply are dealt with in timely fashion, cutting any potential delay to minimum. Following delivery we provide ongoing support for our products, ensuring onsite maintenance and inspection service, as well as remote support.

As part of our Vision and Mission we will continuously strive to meet and exceed our customers’ expectations by delivering quality products on time at a competitive price.
MISSION

To emerge as the most valued organization to Customers, Employees, Business partners, and the Society where we work.

Provide our customers with outstanding, cost effective solutions keeping abreast with the latest advancements in Science and Technology. Create an environment where our employees can learn, grow and be fulfilled in their work.

VISION

OUR JOURNEY

GWT’s capabilities stem from our beginnings in 1992 as a designer and integrator of small scale desalination plant for farms and emerged itself into a solution provider even for pharmaceuticals and hospitals requiring precision, innovation and reliability. This has been built on over the years and now provides us with the capabilities to deliver fast, full support service with flexible solutions. The privately owned company has delivered over 2000 units locally and overseas, with over 100 long-term operations and maintenance agreements. We have a direct and indirect workforce of people located throughout a network of Associates in all Middle Eastern and African regions.

In May 2015, Walford Investments Ltd (WIL) acquired major share of the GWT’s business. The investment by WIL shows confidence in the future of GWT, positioning it as its strategic partner for water treatment projects in the Middle Eastern and African regions.

The focus of our local business has been intensified more into operations and maintenance of systems and our future plans are to expand in the African and Indian Sub continental.
Quality

GWT’s Quality Management System (QMS) includes design, manufacture, installation, operation (including remote operation) and servicing of water treatment, water recycling and other filtration systems.

This Quality Management System delivers that value through quality, technical innovation, product reliability and responsive service.

GWT has a Quality Management System certified to:  
ISO 9001:2015

Environment

GWT has an ongoing commitment to protecting the environment. To comply with this responsibility, processes are aimed to minimise and ultimately potential adverse environmental impacts arising for our work activities. GWT establishes its commitment towards the implementation of an Environmental Management System under the SAI Global OHS company program. GWT has an Environmental Management System certified to:  
ISO 9001:2015

Safety

It is GWT’s policy to maintain a safe and healthy work environment, not only to comply with regulations but also to act responsively to prevent injuries, ill health, damages or losses from any work related activity under its control.

An OHS plan is developed for each project to ensure clients, staff and subcontractors are undertaking best practice principles. GWT is committed to providing a safe and healthy work environment for all our people and aims to finish each work day injury free.

GWT establishes its commitment through the implementation of the Health & Safety Management system under SAI Global OHS company program.

GWT has a Safety Management System certified to:  
AS 4801  
OHSAS 18001
Gulf water treatment Co. Ltd offers a world of water expertise.

**We Design, Supply, Build, Operate and Maintain Water & Wastewater Treatment System.**

Whether your requirement is for a new water desalination plant or sewage treatment plant or hazardous industrial effluent treatment plant or the expert management of a water company to reduce costs and increase income, GWT team has the expertise. Even for refurbishment or upgradation of existing water treatment plant, we have the solution.

Today the key words for water are sustainability and viability and these are being achieved through ethical operating and management, with an expertise and discipline that calls for the input of a professional, specialised GWT team. Today, more than ever before, water is under threat as a consequence of increasing urbanization and industrialization and the demands it places on this precious resource.

As our requirement for pure, clean water continues to spiral, GWT is uniquely placed to meet this global challenge. We can provide cost effective and reliable engineering solutions to produce water to meet these needs.

From proven conventional treatment to high technology innovative processes which have been extensively researched, developed and tested, we design and supply quality treatment for all stages of the water production process.

GWT has the professional expertise and experience to provide reliable, efficient and cost effective solutions for our clients around the world. We offer a comprehensive range of water treatment options and process solutions.

With pride in our past achievements and commitment to the future of water treatment, GWT is focused on meeting the need to protect this precious resource around the world.

**The Major Operations of GWT are Divided into Three Main Areas of Service:**

- Project Engineering / Turnkey Contracts
- Asset Maintenance + Operation
- Rental Service, BOO, BOOT
Some of the key SOLUTIONS offered at GWT are

- Waste Water Treatment System:
- Water Treatment System
- Pumping Station
- Waste to Energy Solutions
- Dosing System
1.1 WASTE WATER TREATMENT

Custom designed to meet specific project requirements; GWT’s wastewater solutions are engineered to satisfy stakeholder expectations and regulatory requirements in respect of sustainability, protection of the environment and public health.

GWT employs a range of technologies with the emphasis on providing plants that can operate to the required standards for the lowest capital and operational costs. This, combined with flexible contract and finance arrangements, makes GWT’s wastewater solutions an attractive option to both local government entities and also to private developers who need to provide treatment plant capacity.

Solutions are proven repeatedly both to build a completely new system as well System argumentation to meet the increased waste generation.

- Sewage Treatment Plant (STP)
- Industrial Waste Water Treatment System (ETP)
- Poultry & Dairy Waste Water Treatment plant
- Grey Water Treatment Plant
- Vehicle Wash Water Treatment Plant
- Laundry Waste water Treatment Plant
- Sludge Treatment System
- Odour Control System

GWT has no exclusive alignments with any wastewater technology or technology provider, enabling selection based on the best suited technology, resulting in optimal solutions with least CAPEX & OPEX,

We choose Process from very conventional to the most advanced

- Activated Sludge Process
- Biofilm Reactors
- Membrane Technologies
- Physicochemical Treatment
1.2 WATER TREATMENT SYSTEM

GWT provides water treatment process that makes water more acceptable for any specified end-use. The end use may be for drinking, irrigations, industrial process water etc. Water treatment removes contaminants and undesirable components, or reduces their concentration so that the water becomes fit for its desired end-use.

GWT have experience in wide range of water treatment technologies from the simplest one to the most sophisticated one. The selection entirely depends on the client’s water quality application.

- Sea Water RO Desalination
- Ground Water (Well) RO Desalination
- River Water Treatment
- Filtration System

1.3 PROCESS WATER TREATMENT

Raw water entering an industrial plant often needs treatment to meet tight quality specifications to be of use in specific industrial processes. GWT Industrial water treatment encompasses all these aspects which include industrial process water treatment, boiler water treatment and cooling water treatment.

GWT provides water treatment solutions for all type of applications, from small domestic equipment to large industrial plants. Our range of technologies and extended know-how in all water related sectors will assure a cost effective solutions meeting tight water quality requirements. GWT participation with client’s right from studying production line and the point of application of water gives the most desirable result. GWT have been working intensively on wide range of industries like Power plant projects, Metal extrusion industries, Printing industries, Paint industries, food and beverage industries etc.
GWT have a complete solution for the following application.

- Boiler feed Water
- Cooling Tower Water
- Deionisation System
- Dosing Systems

1.4 MISCELLANEOUS SOLUTIONS

CLEAN WATER IS THE ELIXIR OF LIFE

GWT also have great expertise in the discrete applications like drinking water, dialysis water for hospital etc. GWT in-house team carries out case to case analysis of water and provides solutions. This requires great knowledge in microbiology, processes designing and engineering. GWT have good numbers of successful installation in the following applications.

- Water Purification System for Hospitals & Pharma Industries
- Centralised Drinking water System
- Odour Control System
- Pumping Stations
- Waste to Energy System
2. TECHNOLOGIES

Implementation of advanced water treatment technologies have been the primary driving factor for the GWT’s growth and success.

We at GWT believe that for a new technology to be considered it must have advantages over traditional treatment processes. These can include lower capital and operations and maintenance costs, higher efficiency, easier operation, better effluent water quality, and lower waste production. We work closely with Universities to broaden and enhance in this field.

Listed below are few most proven advanced technologies which are implemented for various applications.

- Membrane Technologies
- Biofilm Technologies
- Sequential Batch Reactor
- Dissolved Air Floatation
2.1 MEMBRANE TECHNOLOGIES

There are two classes of membrane treatment systems: low-pressure membrane systems (such as microfiltration and ultrafiltration) and high-pressure membrane systems (such as nanofiltration and reverse osmosis).

Low-pressure membranes, including microfiltration (MF) and ultrafiltration (UF), are operated at pressures ranging from 10 to 30 psi, whereas high-pressure membranes, including nanofiltration (NF) and reverse osmosis (RO), are operated at pressures ranging from 75 to 1000 psi.

2.1.1 ULTRAFILTRATION

The Ultra-Filtration Membrane System from GWTs combines unequaled membrane strength with high permeability to create a system solution that provides exceptional effluent quality, meeting the most stringent requirements. This external ultra-filtration system is ideal for reverse osmosis pre-treatment plants, drinking water, industrial water, tertiary wastewater, and reuse applications that require low effluent suspended solids or phosphorus.

**Features**
- Strong multibore fibers
- Large bore diameter means
- PES membrane material resists fouling
- Inside-to-out flow path
- 0.02 µm ultrafiltration
- T-rack assembly has small footprint
- Prewired/pretubed feed skids

**Advantages**
- No fiber breaks
- Low fouling and plugging tendency
- No air scouring
- Even, efficient backwash
- 4 log virus removal
- T-rack assembly is easily expandable
- Easy to install

**Applications**
- Grey water treatment
- Final polishing filter for Sewage and industrial effluent treatment plant
- Drinking water systems
- Surface water treatment
- Groundwater filtration
- Industrial water treatment
- Backwash water filtration
2.1.2 REVERSE OSMOSIS MEMBRANE

Desalination has proven the most significant and effective solution to meet the challenges of population growth and water scarcity in many countries. Reverse Osmosis is the most widespread desalination process because of its efficiency and adaptability to any capacities. Through continue R&D in membrane and technology improvement, costs of RO desalination has radically decreased, making this technology highly competitive.

Accepting customers environmental and economic constraints, GWT’s team has been successful in providing solutions to water scarcity and pollution issues. Considering the inlet water quality and integrating the membrane technology in the entire treatment line, GWT has delivered customized and packaged solutions to ensure plant performance and high water quality.

Reverse Osmosis Systems to purify water by removing salts, contaminants and other impurities. It is also capable of rejecting bacteria, sugars, proteins, particles, dyes, and other constituents that have a molecular weight of greater than 150-250 daltons. Energy Recovery Devices:

Reverse Osmosis Desalination of sea water process operates under high pressure and the energy requirement is very huge. With an Energy Recovery Devices (ERD) when combined with desalination facilities will give a larger saving in energy expenses and improved desalination process efficiency. The pressure exchanger systems recover 90% of the energy, reducing energy demand by between 10-40% and therefore reducing operating costs.

**Highlights**

- Compact and modular RO blocks
- Easy installation, operation and servicing
- Specific selection possible from a wide range
- High level of plant automation (Optional)
2.1.3 MEMBRANE BIOREACTOR

Membrane Bio-Reactors are a treatment technology wherein both biological oxidation and membrane physical separation with membranes that are submerged in the biomass, either inside the bioreactor itself or in a separate tank. The membranes are submerged directly in the bioreactor or in a separate tank and filtration takes place by applying vacuum to the inside of the membrane. Membrane fouling is prevented by the flow of coarse air bubbles along the membrane surface or periodic back flushing.

Prerequisites for the application of submerged Membrane Bioreactors:
- Wastewater should not be highly concentrated (i.e. household wastewater)
- Wastewater that is well biodegradable
- Higher flows (> 20m3/h)

One of the distinct advantages of submerged Membrane Bioreactors is their low energy consumption. Submerged membrane tank, part of a system treating leachate from a landfill.

The System
- High biomass concentration
- Low excess sludge production
- Minimum space and weight
- Low operating intervals
- Stand alone system

Advantages
- Economically attractive
- Compact
- Trouble-free operation
- Options for water reuse
- Fast delivery time 0M N
- Certified by DNV (RMRS at request)

Special Applications
- Reuse for technical applications (deck wash etc.)
- Reuse for toilet flushing
- Use of “extended” system for operating in zero-emission areas
- Tailor-made executions
- Also for Retro-fit
2.2 BIOFILM REACTOR

Moving Bed Biofilm Reactor is an advanced biological process for treating waste water and is highly efficient in removing organics and nutrients from waste water. MBBR utilizes the advantages of both the suspended growth process and attached growth process without the negative effects of either. Systems based on MBBR has BioCarrier filled in the reaction tanks that acts as a protected housing for the microorganisms to grow and act on the waste water. These media has large surface areas and hence makes it possible to harbor immense amounts of microbial biomass with in minimum volume. This inturn helps in reducing the volume required for treatment. With the addition of BioCarriers, and providing the right environment it is possible to have a large amount of specialized active microbial culture in the process tanks, which eliminates the requirement for recycle of sludge to the process tanks. With this it is possible to have multiple streams of specialized organisms in series such as Nitrifiers, De-nitrifiers, BOD consuming organisms etc.

GWT’s Water treatment Professionals have perfected the MBBR system to have the lowest volume required for treatment at the same time keeping the sludge production at the minimum and with having very low operation and maintenance cost. These advancements have been possible due to the diverse team of water processionals with in GWT.

The below are some of the main advantages of our MBBR Systems:

- Grey water treatment
- Final polishing filter for Sewage and industrial effluent treatment plant
- Drinking water systems
- Surface water treatment
- Groundwater filtration
- Industrial water treatment
- Backwash water filtration
The process configuration designed for BOD removal only is a once-through design, with 1 to 2 process stages in series. The number of stages is determined according to the required effluent quality. Wastewater enters the reactor, and effluent exits the reactor to a solids separation unit such as a clarifier, a DAF unit, media filtration, etc. In this configuration, there is no sludge recycle to the aeration tank, and all of the biological activity takes place in the bio-film on the carriers.

When Nitrogen removal is also required, the process will include a larger number of process stages, and an internal circulation of nitrified effluent to a pre-denitrification basin, but other than this, there is no sludge recycle from the solids separation unit.

The MBBR configuration is extremely well suited for a wide range of applications: from pre-treatment of RBC of industrial wastewater in order to cut down the organic load, to full treatment of municipal wastewater to the most stringent effluent requirements, as a stand alone solution Applications

- Sewage treatment
- Food and Beverage industries
- Paper industries
- Poultry Farm
- Dairy Industry
2.3 SEQUENTIAL BATCH REACTOR SBR

Wastewater treatment has been a challenge throughout the years due to varying influent chemical and physical characteristics and stringent effluent regulations. Treatment systems using activated sludge have been able to handle many of these difficulties. Given the lack of on-line computer controls, continuous flow systems have been mostly used for these purposes versus sequencing batch processes. The advancements in the field of automation has now made the option of a SBR process more attractive thus providing better controls and results in wastewater treatment. This is coupled by the flexibility of a SBR in the treatment of variable flows, minimum operator interaction required, option for anoxic or anaerobic conditions in the same tank, good oxygen contact with microorganisms and substrate, small floor space, and good removal efficiency.

Conventional activated sludge systems require separate tanks for the unit processes of biological reactions (aeration of mixed liquor) and solids-liquid separation (clarification) and also require process mixed liquor solids (return activated sludge) to be returned from the final clarification stage to the aeration tanks. In contrast to this GWT designs timer based Sequential Batch Reactors (SBR systems) in which all phases of the treatment process occur sequentially within the same tank.

Sequencing batch reactors operate by a cycle of periods consisting of fill, react, settle, decant, and idle. The duration, oxygen concentration, and mixing in these periods could be altered according to the needs of the particular treatment plant. Appropriate aeration and decanting is essential for the correct operations of these plants. The aerator should make the oxygen readily available to the microorganisms. The decanter should avoid the intake of floating matter from the tank.

2.4 DISSOLVED AIR FLOTATION (DAF)

This is a proven and effective physical/chemical technology for treating a variety of industrial and municipal process and wastewater streams. DAF systems are commonly used for the removal of oils & greases and suspended solids to meet a variety of treatment goals including:

- Product recovery and reuse
- Pretreatment to meet sewer discharge limits
- Pretreatment to reduce loading on downstream biological treatment systems
- Polishing of biological treatment effluent
- Thickening of bio-solids
There is a wide range of industrial and municipal applications for DAF including:

### Industrial Applications
- Poultry processing
- Meat processing
- Laundries and textiles
- Egg processing
- Byproduct rendering
- Pulp and paper
- Plastics recycling
- Dairy and milk products
- Metal plating and finishing
- Bakeries
- Confectionaries
- Food processing
- Snack food processing
- Beverage
- Petroleum and petrochemical refining
- Natural gas and petroleum fracking
- Biochemical
- Personal care product

### Municipal Applications
- Waste activated sludge thickening
- Biological solids clarification
- Phosphorous removal
- Algae removal

**The DAF Process**
The GWT’s DAF systems are designed to remove suspended solids (TSS), biochemical oxygen demand (BOD5), and oils and greases (O&G) from a wastewater stream. Contaminants are removed through the use of a dissolved air-in-water solution produced by injecting air under pressure into a recycle stream of clarified DAF effluent. This recycle stream is then combined and mixed with incoming wastewater in an internal contact chamber where the dissolved air comes out of solution in the form of micron-sized bubbles that attach to the contaminants. The bubbles and contaminants rise to the surface and form a floating bed of material that is removed by a surface skimmer into an internal hopper for further handling.
Key Features

- Fourteen (14) different units to meet a variety of applications and flow ranges (10 to 2,500 gpm)
- Available in 304 or 316 stainless steel construction
- Complete, skid-mounted design for ease of installation
- (no field assembly required)
- Rectangular profile for maximum space utilization
- Rugged tank design that will not flex
- Superior performance without the use of plate-pack that can foul or collapse
- Large, internal float hopper removes the need for an external float tank

Each DAF system comes with:

- All stainless steel tank construction
- Quality drive and pump components for long-term reliability
- Multi-step quality control program
- Full construction and component warranties
- Complete start-up and training services
- Process design assistance
- Expert technical support before and after installation

System Options

- Flotation cell cover to contain and vent process gasses
- Integrated floc tube
- Analog pressure/flow monitoring sensors
- Laser sludge level monitoring
- Effluent TSS monitoring
- Custom control systems (PLC, HMI, SCADA,)
GWT provides operations and maintenance services to over 100 plants located throughout the region. This has provided GWT’s customers with the ability to meet their water management requirements and their related whole of business objectives on an ongoing basis. Regardless of whether GWT or its client is the ultimate owner of the plant and associated asset, GWT takes a whole of life asset management approach with all of its operational projects.

- **Asset Maintenance + Operation**
- **Parts And Consumables**
- **Site Water Management**
- **Rental Service**
Effective asset management commences with having clarity around the goals, objectives and desired service levels for a particular asset/plant. This is then used to develop a comprehensive asset management approach that incorporates a preventative and corrective maintenance regime with appropriate ‘triggers’ for asset replacement in the medium to long term.

GWT’s primary asset management tool is a Computerised Maintenance Management System (CMMS) which is used for life cycle maintenance planning, including preventative maintenance, asset replacement planning and recording of unscheduled repair, breakdowns, inspection and calibration data. It is also used to help prepare the list of critical and operational spares required to ensure that plant availability requirements are met throughout the operational life of the asset.

3.1 ASSET MAINTENANCE + OPERATION

The benefits of GWT operating your plant:

- Customised approach to suit your needs, internal capability and risk profile
- Optimised plant reliability and performance
- Minimised energy and chemical consumption
- Reduced brine discharge
- Optimised asset management with minimum whole of life cost
- Industry leading safety and environmental performance
- In-house process troubleshooting and reporting capability
24/7 Monitoring Via Plantconnect
GWT operates a 24 hour fully manned Control Centre, providing a complete plant monitoring and control solution utilising proprietary PlantConnect software. This means that clients’ plants are constantly monitored across the globe.

Real time performance data from plants controlled through the Centre is consolidated and used to manage maintenance scheduling and to optimise overall management of the asset. The Control Centre team uses this data to control product water quality and quantity, operational set points and plant status. This allows action to be taken immediately to alter critical parameters and mitigate the risk of noncompliant plant performance or unnecessary shut down.

Further, real time data can be trended on an ongoing basis and reviewed by specialist process engineers who understand the anomalies of treatment plant and membrane performance. This allows the plant to be operated in a mode that optimises long term cost of ownership.

3.2 PARTS AND CONSUMABLES

GWT stock an extensive range of spare parts, consumables and instruments that support various water treatment systems.

The parts and consumables range includes:

- **Chemicals** – GWT’s own range of specifically formulated chemicals for membrane cleaning and water treatment system optimisation
- **Membranes** - for reverse osmosis, nano, ultra and micro filtration and ceramic
- **Instruments & Analysers** - inline, online and hand held analysers
- **Dosing Pumps** - chemical resistant, in either fixed or variable speed
- **Filter Media** - activated carbon, sands and gravels for multi-media filters
- **Cartridge Filters & Media Housings** - spiral wound and poly spun for multiple filter configurations
- **Ozone** - generators, destructors and measuring equipment for the full range of parts and consumables
3.3 SITE WATER MANAGEMENT

GWT are experts when it comes to site water management. By managing the commercial and technical implications of the water quality and quantity, GWT ensures cost-effective treatment of water to site.

This allows the client to focus on their core business, while GWT provides the water supply:

- GWT designs and supplies the equipment needed to achieve the quality and capacity specified.
- GWT manages installation of plant at the customer’s site.
- GWT manages the operation & maintenance of the equipment to ensure reliable performance against the objectives.
- Water is charged on a per-kL basis.

3.4 RENTAL SERVICE

Gwt maintains a large inventory of pre-owned and remanufactured equipment available for rent. Our rental units are easy for transportation, mobilization & demobilization. Rental Plants are ideal for labour camps, construction site etc.
CLIENT LIST

Petrofac
bp
Drydocks World
Sharaf Group
Skydive Dubai
Shell
RAK Ceramics
Gravity
CNPC
AJMAN SARAY RESORT
Government of Dubai
Khansaheb
Habitat School
Petroleum Development Oman
Al Masaood
Alumill Tech Gulf LLC
Tech Group
Ghantoot Group
Coral Beach Resort Sharjah
Al Khattal Group
CLIENT LIST

Serck Services International
Government of Fujairah
K H K Scaffolding & Formwork L.L.C.
Royal Catering
The Wave
ETA
Royal Furniture
Al Jads Poultry Farm LLC
Nationale Aluminium Extrusion LLC
Elite
THUMBAY
الهيئة العامة للكهرباء والماء
Public Authority for Electricity and Water
شركة الرستماني التجارية
AL ROSTAMANI TRADING COMPANY
Larsen & Toubro
Hyundai Engineering & Construction
Faisal Holding
BARARI Forest Management
'Sustainable in Practice'

Environmental issue is not just a matter of due diligence. It's a matter of principle. Respecting and safeguarding the environment are two of the core values underpinning our business. In keeping with those commitments we engage in and promote all activities designed to curb the environment impact or our processes, products, and raw materials on a lifecycle basis.