

A.T.E.'s growing presence in Air, waTer and Energy – in addition to textiles

Associated Textile Engineers for the last 75 years has been working on achieving social goals through business. And over these 75 years, A.T.E. has grown into a successful, multidimensional engineering group. A.T.E. was founded as a part of India's freedom movement. The idea – to sell high quality German textile machinery in India to challenge the prevailing British monopoly in the field. This endeavour helped in the modernisation and growth of the Indian textile industry, which now holds a strong position in the world. A.T.E. today is recognised as a leader in textile engineering in India, offering end to end solutions across the textile value chain.

A.T.E. also diversified into the fields of flow technology and print and packaging equipment in the 1970s, thus building-up expertise in diverse fields.

In the year 2000s, a new generation of management took over the reins at A.T.E. The strategies going forward was to build on the businesses A.T.E. had been in, but also go further in achieving social objectives. Well before “green” became a buzzword, A.T.E. decided to build up environmental businesses. Moreover, A.T.E. thought it right to “invent in India”, and set about creating original and sustainable products and solutions. And so, in 2006, A.T.E. started developing products based on Machine-to-Machine (M2M) technology – today better known as IoT. Since then, A.T.E. has also developed technologies and deployed products in wastewater treatment, eco-friendly cooling, and energy and process efficiency. So, A.T.E. encompasses three essential elements of life: Air, waTer, and Energy in the sustainability space.



Mr Anuj Bhagwati, Head of A.T.E. Group

Anuj Bhagwati, Head of A.T.E. Group says “I have always been passionate about the environment and want to create a positive environmental impact, particularly as I am deeply concerned that India will be badly hit by climate change. I also want to promote a culture of thinking for oneself and crafting original solutions. It's the A.T.E. way to work on achieving social goals through business. I believe we will also create sustainable stakeholder value in the process”, said Mr Anuj Bhagwati, head of the A.T.E. group, which succinctly underscores A.T.E.'s commitment to environment and the theme “invent in India”.

This feature particularly focus-

es on A.T.E.'s businesses in the sustainability space.

The next generation cooling solutions

Fresh air can work wonders. A growing number of studies in the education, healthcare, and manufacturing sectors have shown increased productivity when people can breathe healthy fresh

air. If fresh air can work wonders, fresh cool air in hot climates is even better. That is precisely what HMX, a business unit of A.T.E., delivers with its unique, patented technology. It provides fresh cool air for the industrial and commercial sectors that not only enhances human comfort, improves process efficiency, and boosts productivity, but also improves ambient conditions and



HMX Cooling Products

helps in safe storage of goods. HMX's solutions can do this without the heavy power used by air conditioners, in an environment friendly way, and at an affordable lifecycle cost!

At the heart of all HMX products is the DAMA (Dry Air Moist Air) – a patented heat exchanger (US and Australian patents received). It's a cross flow plate type sensible heat exchanger built out of an engineering polymer, which provides a non-corrosive, non-biodegradable and anti-bacterial substrate, and has an efficiency of more than 80%. The HMX DAMA has been type tested in HMX's specially outfitted internal laboratory that is built as per ASHRAE standards in a test witnessed and verified by UL (Underwriters Laboratory).

HMX has the world's largest installed base of indirect evaporative cooling with more than 35 million CFM spread over 7 million+ square feet in India, covering applications in both the industrial and commercial segments. More and more large corporates and multinationals across segments such as automobiles, engineering, food and beverage, etc., are turning to HMX for innovative cooling solutions to increase the satisfaction of their workforce, and for improving process efficiency.

HMX constantly endeavors to improve its existing products while expanding its portfolio of cooling solutions. One such example is the HMX IDECool, which

is designed specifically for energy efficient cooling of small and medium establishments. Like HMX's other product lines, the IDECool is based on patented Indirect Direct Evaporative Cooling technology (or IDEC).

World class wastewater treatment solutions

With depleting fresh water sources, both in terms of quality and quantity, water scarcity is a burning issue globally. Therefore, water treatment and conservation has become a compelling need today.

A.T.E. believes that wastewater is the best source of water. Recycling wastewater can go a long way in mitigating the water crisis, if modern treatment technology is optimally leveraged. A science-based approach is the cornerstone of A.T.E.'s wastewater treatment venture, A.T.E. Envirotech Private Limited. A.T.E. Envirotech offers comprehensive, innovative and cost-effective wastewater treatment and recycling solutions, including zero liquid discharge. It has a team of highly experienced professionals, and has built-up

strong capabilities in wastewater management. The company undertakes turnkey projects as well as upgrades existing plants through value-added products and processes, and caters to a wide spectrum of industries such as chemicals, petrochemicals, textiles, food and dairy, sugar & distilleries, pharmaceuticals and residential townships.

As a result of continuous process development, A.T.E. Envirotech has introduced several novel methods for treating industrial wastewaters. A.T.E.'s AAA™ technology is a highly successful innovation for treating textile wastewaters that enhances biological treatment efficiency and minimises sludge generation. AVR™ (Anaerobic Venturi Reactor) based biomethanation plants have been proven to handle difficult to treat effluents from the sugar and distillery and food and dairy industries. To overcome the challenge faced by the API (Active Pharma Ingredients) industry in treating their wastewater, A.T.E. has also developed a highly successful solution called AHR-P for API wastewater treatment using anaerobic + aerobic biological treatment.



ATE Wastewater treatment plants

Wastewater treatment projects from A.T.E. are also packaged with 'EnviroCOLA®', a customised online assistance system that will provide all the information needed about an A.T.E. Envirotech plant, which can be accessed anytime, anywhere.

For expanding its offerings for the wastewater treatment and recycling, A.T.E. has also partnered with Huber of Germany. With over 33,000 installations worldwide and with a presence across about 60 countries, Huber is one of the world's leading company in the field of water, wastewater and sludge treatment. Huber's main thrust in India is the municipal segment as well as industrial effluent treatment.

Efficient pumping solutions for water management

Efficient water management is integral to water conservation. A.T.E. has over 3 decades of expertise in flow technology. It now offers a wide range of highly efficient pumps that include well known global brands like Sulzer abs, Yamada, Iwaki, along with A.T.E.'s own brand of TeraFlow pumps and TeraFlow HyP systems.

TeraFlow vertical multi-stage stainless steel centrifugal pumps are designed and engineered to deliver excellent hydraulic efficiency in diverse applications such as water supply in industrial and commercial establishments, industrial washing plants, water



Flow technology

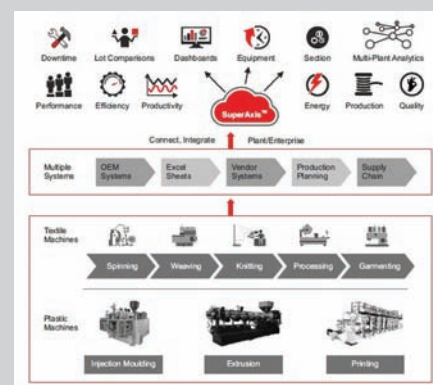
treatment plants, etc. The in-line design of the TeraFlow pump makes it compact and easy for installation. TeraFlow pumps are equipped with mechanical shaft seals of detachable cartridge type for easy maintenance. The TFVI and TFVL series of TeraFlow pumps are standardised pumps made of all stainless steel 304/316 construction.

TeraFlow Hydropneumatic (HyP) systems are engineered using the most stringent quality and testing standards. At the heart of TeraFlow HyP systems are A.T.E.'s TeraFlow centrifugal pumps and instrumentation & control systems made of the best components. The scalable design of the TeraFlow HyP systems enable a variety of configurations, ranging from fixed speed systems to advanced and fully automated variable speed systems. The TeraFlow HyP systems are available in a wide-range of configurations of pumps (vertical, horizontal, submersible), and with varying levels of automation and intelligence and are designed for the lowest total cost of ownership.

A.T.E.'s flow technology specialists serve across industry verticals such as textile, pharmaceutical, chemical, etc., and for a variety of applications. With a strong reputation for excellent application know-how, high quality products, and excellent after-sales-service support, A.T.E. has built a strong base of satisfied customers.

Internet of Things for industry

A.T.E.'s business unit EcoAxis provides smart manufacturing analytics using industrial IoT for driving peak performance of industrial plants and equipment. EcoAxis offers end-to-end industrial IoT solutions and services that cover



consulting, deployment, training, and support. These industrial IoT solutions help digitise manufacturing shop floors, empower OEMs to make their products smarter, and track sustainability indices for a wide range of industry verticals. EcoAxis portfolio of SaaS solutions includes three broad offerings: Smart manufacturing, Smart technology and service, and Smart sustainability suites.

EcoAxis has executed a large number of pioneering projects across several sectors such as power, textile, sugar, energy, water, facilities, equipment, and other industries. The solutions have benefited end users in improving production, productivity, and availability, reducing losses, as well as effectively managing energy & resource utilisation and improving plant maintenance. Leveraging A.T.E.'s domain expertise in textiles, EcoAxis has developed customised solutions for textiles intended to deliver value of digitisation to the textile industry.

Recognised as one of the top 20 IoT solutions providers, and recently awarded the prestigious Growth Excellence Leadership Award in 2017 by Frost and Sullivan, EcoAxis understands the most critical challenges of each customer, sets up systems to collate pertinent data, and builds advanced analytics that generate insights for better decision making.

Energy Efficiency

Building on solid technical fundamentals and through continuous R&D, A.T.E. has developed a solar concentrator – a proven Concentrated Solar Thermal (CST) system that harnesses the sun's rays to provide process heat for various industrial and commercial applications. This in turn reduces the use of carbon-intensive fuels and directly im-

pacts the bottom line.

The A.T.E. CST System has won a national award in 2016, which speaks of the outstanding effectiveness of this technology. Growing environmental awareness, proven technology, and a faster ROI has made A.T.E. CST system a preferred choice of many business and social entrepreneurs as is evident from its fast expanding footprint in India.



Solar concentrator

Process Efficiency



Solar concentrator

Valence Electronics (an A.T.E. group company) provides comprehensive solutions to improve safety, and process efficiency in the textile processes, leading to improved productivity and quality. Valence's tailor-made solutions are intended for the control of static electricity in various applications such as carding, warping, weaving, processing and finishing. Valence

also provides air-to-air heat recovery systems to capture waste heat from stenters and hot air dryers.

Partnering for a sustainable future

A.T.E.'s sustainable portfolio find wide ranging applications in textiles and A.T.E. is fast expanding its footprint in the textile industry with these solutions spurred by the growing awareness and commitment of the industry to adopt green technology and practices for a sustainable future.