



***FiRE*SiDE**

The House Magazine of the Thermax Group Volume 49 No. 3 July - September 2019



About the Cover

*A lantern is just a paper,
If not for the light it holds.*

*So are we humans - worthless mortals,
If there's no light spreading from our souls.*

Photo by Sameer Karmarkar

BACK COVER
**Exemplary
projects
rewarded at OPEX
Convention**

Comment

“Leadership is not about the
next election, it's about the
next generation”

– Simon Sinek

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What's New?

18 MW captive power plant
for a cement company in
Telangana

Building a sustained partnership



Power EPC division commissioned an 18 MW coal-based captive power plant for a cement company as a part of its expansion project in the state of Telangana. The power plant has a flexibility of firing both 100% Indian, as well as imported coal, with 80 TPH CFBC boiler, at 110 kg/cm² pressure and 540° C temperature.

Thermax has cherished a healthy relationship with the customer since 2010 when it bagged the first power plant order for one of their joint venture companies which was completed as per specification. Since then,

they have been a regular customer of Thermax for their air pollution control requirements.

The scope of the project comprised detailed engineering, design, supply, erection and commissioning for the plant including boiler, steam turbine generator, air cooled condenser, fuel handling plant, ash handling plant, electrostatic precipitator, water treatment plant and electrical, mechanical & instrumentation systems, except civil construction. The project was commissioned in June 2019.

CSIR partners with Thermax to unveil India's first fuel cell system

September 26 was a proud day for Thermax when Dr. Sonde, Head of Research and Technology, Thermax, shared the stage with the Hon'ble President of India, Mr. Ram Nath Kovind. On the occasion of the CSIR (Council of Scientific and Industrial Research, under the aegis of Ministry of Science & Technology, Govt. of India) foundation day at Vigyan Bhawan, Delhi, Mr. Kovind unveiled India's first fuel cell system prototype which will meet the

requirement of efficient, clean and reliable backup power generation for telecom towers, remote locations and strategic applications.

The system is developed under Public-Private Partnership (PPP) among CSIR's three laboratories and two Indian industries – Thermax and Reliance Industries Limited. This 5.0 kW fuel cell system, generating power in a green manner using methanol/bio-methane, has the potential to replace diesel generating (DG) sets

and help in reducing air pollution.

"This prototype delivers power with about 70 percent efficiency. It also works as a mini-heater," said Dr. Sonde at the unveiling event. "It is a silent power generating unit and has very low carbon footprint," he further emphasised. He added that the product will "displace diesel generators and also reduce India's dependence on oil imports."

Representatives from CSIR laboratories along with officials from Thermax and Reliance - unveiling India's first fuel cell system



Rs. 471 crore order for two Flue Gas Desulphurisation (FGD) systems

The Air Pollution Control (APC) business had every reason to celebrate when they concluded an order of Rs. 471 crore from an Indian government power company to set up two flue gas desulphurisation (FGD) systems at their thermal power plant in the state of Jharkhand. This is the largest order received by the division till date.

As a part of the customer's drive to meet the mandates for regulating SOx emissions from coal fired power plants, they plan to install two units of

FGD systems of 500 MW capacity each at their plant. "This prestigious order reinforces our capabilities in supporting power plants to meet stringent emission laws laid by the government in line with its commitment to the environment," says M.S. Unnikrishnan, MD & CEO, Thermax Limited.

The scope of supply includes design, engineering, manufacturing, civil work, construction and commissioning of the FGD systems. The delivery of the project is scheduled over 30 months.



Ultramind – a smart solution to optimise process heating

The Heating division has embraced the digital wave by transforming their process equipment into smart equipment to consistently provide optimum and failsafe performance to customers.

Ultramind is an industrial analytics and IoT enabled solution that can be integrated with boilers and heaters, having PLC systems of any make.

The variability in human interventions makes boiler operations skill dependant. Ultramind helps identify gaps in operating parameters, analyse factors and make necessary recommendations to improve combustion and heat transfer process. Some of the critical factors monitored include fluctuations in fuel quality, steam to fuel ratio, various losses, direct and indirect efficiency.

Equipped with a robust MIS, it also analyses the impact of changes in the boiler after the implementation of recommended parameters and proposes further fine-tuning if necessary.

All put together; this new age system offers an augmented experience to customers by bringing in the highest possible efficiency, highest safety standards, seamless maintenance and critical spare parts planning.

Ultramind is being offered with our new units and for running installations, it is offered as a retrofit. Currently it is available for two combustors - reciprocating grate and fluidised bed.

A new pin on Thermax's global footprint landscape



345 TR chiller at Industrias Venado, Bolivia

Thermax successfully commissioned a 345 TR double effect vapour absorption chiller at Industrias Venado in Bolivia. The company manufactures yeast and gelatine products under well-known brand names, viz. Fischmann and Royal. The chiller operates on natural gas and provides chilled water at 12° C. This chilled water is used for maintaining a low temperature during the fermentation process, thus catering to the process cooling requirement.

With this installation, we have commissioned our first absorption chiller in this country. Thermax's energy efficient chiller is helping the company increase the efficiency and productivity of its process.

Largest overseas order for ESP

In recent years, the Air Pollution Control business has established several strong references in South East Asia, thanks to its expertise in project execution complemented with increased enforcement of air pollution norms by the Government. A recent feat in this journey was the commissioning of an Electrostatic Precipitator (ESP) for the Sarangani Energy Corporation in the Philippines - a power producing major in South East Asia.

This project is the largest overseas installation by Thermax, where the ESP treats flue gas with volumes as high as 0.7 million Am³/hr emanating from a 410 TPH CFBC boiler to meet the required emission norms.

The high point of the project was supplying precisely engineered ESP structure along with a 75 meter tall stack by way of sub assemblies and commissioning the entire edifice at the customer end on time and with no errors while complying with all safety norms. Seamless and cohesive planning, right from engineering to logistics, resulted in appreciation from a delighted customer and proved our capabilities in providing customised solution.

Thermax ESP at the Sarangani Energy Corporation in the Philippines



Seeding innovation for the future

RTIC Incubation Manufacturing Centre set up in the Thermax Energy House premise at Pune, was inaugurated by M.S. Unnikrishnan on 2nd August 2019. The event started with ribbon-cutting followed by lighting of the ceremonial lamp and *puja*. In his keynote speech, Unny congratulated Dr. R. R. Sonde and team for creating this facility.



Unny inaugurates the RTIC incubation centre

The centre is built over 1,500 square meter and equipped with state-of-the-art manufacturing infrastructure. This facility will be utilised for technological product development of RTIC and will enhance their in-house manufacturing capabilities.

"The primary objective of the incubation centre will be to bridge the gap between prototype development and commercialisation. Once the technology prototypes are complete, this facility will support us in manufacturing pilot units for various tests, certifications and customers trials. This will help us assess the manufacturability of our innovation without risks associated with mass production and considerable investments in the teething stages," says Dr. Sonde.

Leveraging this facility, the RTIC team is working on some exciting unconventional technologies, primarily in the areas of energy storage and waste heat recovery.

Expressions



The more 'cognitive diversity' we seek
– looking at the
problem from various
dimensions, the
better the outcome.

A few months ago, we celebrated our Operational Excellence (OPEX) convention and awards. I had given a short talk which I thought of sharing with a wider audience through 'Expressions' in this issue of Fireside.

'Excellence is nothing but the pursuit of perfection. It has no end', is my belief about our quest for OPEX; a journey that we formally initiated 15 years ago and continues today with increased levels of enthusiasm and participation.

Being at the Thermax OPEX convention this year was a sheer delight. I could feel the air of pride when more than 30 teams presented their projects and concluded by explaining how they had solved a customer challenge, addressed a need in the market, made us far more agile in reaching out to customers, reduced cycle time or increased uptime. Some of the projects have been taken to reduce costs or carbon footprint and some to improve productivity. I am glad to notice a welcome shift over the years, in the quality of projects chosen. They intend to fulfil a strong need and that's what's important.

I'd also like to share a few reflections after going through the various projects. Firstly, OPEX is a journey and not a destination. And hence, Thermax should have many improvement projects going on at any given time.

We now have a number of platforms, viz. Divisional Apex Review Team (DART), Customer Interaction Centre (CIC), Salesforce Service Cloud, Orders Lost and our Customer Satisfaction Survey (CSS) that should feed inputs to trigger OPEX projects through the year. The question we need to keep asking ourselves is how do we become faster, better, cheaper, sustainable, more efficient and effective in the market. I am sure that will give a cue for a plethora of opportunities to improve.

In today's fast pace and ever-changing world, one major distinction between companies who enjoy a market dominance and the ones who struggle to stay afloat is the speed of response and turnaround time to customer needs. We have many projects with a long completion time; over a year in many cases. OPEX projects to my mind need to be purposeful, brainstormed, monitored carefully, and completed within weeks, after which it needs to be tracked diligently, such that we have truly accomplished what we set out to do. Then move to the next one.

'Awareness' is the first trigger to getting something done; which can be augmented through a lot more communication and collaboration between departments and divisions. The more 'cognitive diversity' we seek – looking at the problem from various dimensions, the better the outcome. For example,

a psychologist can add value in product design, since they understand customer behaviour. So, collaborating with seemingly disparate departments, even divisions could work wonders. How often have we invited our vendor partners or Thermax Channel Associates (TCAs) to be part of the solution? Do try it out – you may be pleasantly surprised!

I've seen some great ideas that have worked in one division – how do we make sure it is replicated across Thermax? Here, if you involved people from another division as part of the team, it would get replicated seamlessly. The whole idea of Operational Excellence is to bring a sense of efficiency, effectiveness and excellence in the way we carry out our business, creating a world class organisation. In projects, B&H has shown the way – they have set the tone for modularisation. Can we replicate this mindset of modularisation across Thermax? Can all our businesses start thinking and planning modular? If we want to be a global company, this is the only way to go!



It would also be great to see more application of IoT in future projects, which would enable us to reduce time and human errors substantially. Moreover, it will help us deliver a lot more value to our customers.

Earlier, not many projects were on the critical path (i.e. the minimum time needed for any

operation), but I am happy to see, that is not the case this year. However, we need to 'up' the game after 15 years – we can't afford incrementalism. We need to benchmark ourselves with the very best, rather, be the benchmark for others to follow.

Finally, it all boils down to an attitude of 'I Care' and 'I will be the change I want to see'. I remember reading my father's book wherein he mentions that 'quality is indivisible'. We can't say that we make great pressure parts; we need to remember that we make an entire boiler that needs to last 25 years. Today we also sell steam; we sell uptime; we sell the lowest life cycle cost – so we're constantly having to move up the value chain, interacting and transacting with customers that are far more demanding.

Going ahead, manufacturing companies like Thermax will face multiple challenges. What was relevant yesterday may not be relevant today. The world around us is reshaping at great speed. My plea to all of you would be to think about excellence as a habit. If so, you will practise it whether at the workplace or at home, with our vendors or our TCAs. It is certainly a mindset; but it's also a heart set – if we truly want to 'make a difference' to our customers, if we genuinely want to attain our vision of becoming 'world class' and therefore 'globally respected', we must learn to take initiatives, work across departments, divisions,


**Finally, it all boils
down to an attitude
of 'I Care' and
'I will be the change
I want to see'.**


companies, in global teams, with a genuine passion to achieve what we set out to accomplish.

Congratulations to the winning teams as also all those who participated in the Thermax OPEX Convention award. I want to thank Hitendra and the team for their efforts and enthusiasm in organising this event and in driving forward the Operational Excellence agenda at Thermax.

Let me conclude with this relevant quote from Peter Drucker:
"The greatest danger in times of turbulence is not the turbulence—it is to act with yesterday's logic."

Let's move forward with tomorrow's logic and "make a difference"!

With warm regards,

Meher

Up Close

My objective is to build a performance-driven culture.

Dinesh Mandhana in a conversation with Swastika Mukherjee shares his journey from a project manager to the Chemical division head and his vision for the business.

After all, it's the people who make it possible.

“Incidentally, I am the first employee of Thermax to be hired in Gujarat for setting up a greenfield chemical manufacturing plant,” recalls Dinesh Mandhana with pride. When the Thermax management decided to diversify its chemical manufacturing base to Gujarat in order to leverage the infrastructural benefits of the chemicals cluster in the state, they were looking for someone having an expertise in setting up greenfield chemical facilities at par with global standards.

“I was on my way back from Singapore, where I had just completed transferring the production base of my previous company. That's when Thermax happened to me.”

A graduate in Chemical engineering, Dinesh joined Thermax in 2008 after working for 13 years with Ion Exchange Ltd. and BASF/CIBA, operating from Ankleshwar, Gujarat. He joined as a Project Manager and steered the establishment of the Jhagadia plant for specialty chemicals in 2011. Soon after the facility commenced its commercial production, he moved to Pune as the Operations Head for the overall Chemical business. The next project at hand was the need to expand the ion exchange resins capacity and diversify from the existing base at Paudh (Khopoli) in Maharashtra. Subsequently, Thermax commissioned its world-class resins facility at Dahej by the end of 2017.

When asked what it takes to make such turnkey projects a success,

he said, “While investments are a prerequisite, the key is to understand and define a purpose and align efforts accordingly. Our setups in Dahej and Jhagadia emanated from the fact that we are competing with the world's largest chemical players. In addition to great products, we needed a sophisticated and automated facility that can be showcased to customers from the US and Europe. But the bigger challenge was to sell this concept of automation to my existing team at Paudh who had an empirical knowledge of our systems and processes and gear them to transition from a manual plant. I did not want to impose the change, rather garner their acceptance and support, so they become a part of the journey. After all, it's the people who make it possible.” Dinesh acknowledges that Thermax's culture and value system ingrained in its people helped him to a great extent.

In 2017, Dinesh assumed the position as the Business Head for the Chemical division. He confessed that it wasn't a career move that he envisaged. “My ultimate career goal was to become the Operations Head of a large multinational. I am thankful to Thermax for grooming me through LDPs (Leadership Development Programmes) and various other learning interventions.”

He had to acquire new leadership and personality traits to move from a back end production role to leading an entire business. He says, “For the first time in my career I was exposed to customers and realised the importance of customer-centricity. Entire efforts put in a

customer-centric

factory can be soiled if it does not address the need or challenge of customers. As I was used to being in control of the outcome and see immediate results, I had to develop a lot of patience and perseverance when working with customers where the results could take a long time or not necessarily be as expected. My biggest achievement has been my acceptance as a leader by a team who has worked with the company for over two decades.”

But one thing Dinesh carried with him in this transition is the approach of honesty and simplicity in articulation. He cited an incident when a huge consignment supplied to an American customer was rejected and Thermax agreed to resupply it by air, incurring a massive cost to regain the trust of the customer. “Rather than camouflaging the situation to our advantage, I admitted our mistake which was primarily a fault in the packaging. When I presented the case to our management, they appreciated my intent and stood by me. Today this American customer is one of the biggest accounts for Thermax.”

He admires Thermax for empowering him with a lot of freedom to make decisions and allow for mistakes if they are with honest intent and do not breach the value system of the company.

Speaking on the way forward he said, “Today we are a 400-crore business; addressing a potential market of over 30 billion dollars with only a handful of biggies of the likes of Dow Chemicals and Lanxess. So there is enough headroom for

growth. Our primary objective is to reach the 1000 crore mark to be able to position ourselves as a significant player in the Chemicals arena and attract the best talent in the industry. We need to develop a global mindset – think ‘globally’ and act locally. Our key focus market outside India would be the US,” says Dinesh who is also the Director of Thermax Inc. He sees a lot of potential for oil field chemicals in the US and plans to leverage their base location of Houston, the oil capital of the world.

So, what are the drivers? He says, “We have laid a strong foundation with world-class manufacturing capabilities and a great team. But it is also important to identify and address the present shortcomings in systems and processes while sustaining growth before we move to the next level. Leaping without preparedness could mean multiplying inefficiencies that could be catastrophic. We also need to detach ourselves from Thermax's aura as an engineering company and strengthen our identity as a chemical major.”

He further adds, “The whole business of chemicals has transitioned from product-based selling to a solution-based model. It is imperative to build an ecosystem of processes and people that orbits around customer needs. My objective is to build a customer-centric performance-driven culture.” He believes Thermax has a great culture but needs to strike a balance between people centricity and thrust on performance to stay competitive.

“We need to invest and focus

on radical innovation to develop technologies of the future that are sustainable, not just in terms of products but also our manufacturing processes, to stay relevant beyond the next five years. Being a chemical company, we have a higher obligation than other industries to join the circular economy bandwagon,” concludes Dinesh.

Dinesh is settled in Pune with his wife Jyoti and son, Yash who is pursuing his mechanical engineering from the prestigious Indian Institute Technology (IIT), Mumbai.



Round up

Strong partnership for success

Let's grow together' was the theme of the Business Partner Meet organised by the Corporate Sourcing and Materials Group on 28th and 29th August 2019, in Pune. Around 300 key vendors were invited to join Thermax's journey of becoming smarter and digitised, spreading to new geographies and taking the next stride towards Thermax 3.0. The first day was hosted for the fabrication, steel and raw materials vendors while Day 2 was reserved for suppliers of electrical and mechanical bought-outs.

Prior to the event, Thermax proactively collated expectations from its business partners and all the queries were addressed in a focussed manner during the course of the event.

From the senior management, Pravin Karve - CEO, TBWES; Bill Shukla - Business Unit Head, Environment; Anant Kshirsagar - Corporate HSE Head and Mangesh Patil - Corporate Sourcing Head addressed the gathering where they emphasised on a cohesive and sustainable growth together and the need to innovate in the fast-changing business environment.

Besides, the Corporate Sourcing team also shared insights and improvement actions emerging from the vendor satisfaction survey and introduced the business partners to the broader Thermax portfolio, emphasising on multidivisional business opportunities.

The programme was well-received by the business partners with encouraging feedback on the insights gained, expectations met and allied networking opportunities; setting the stage for a renewed partnership.

The team behind putting together the 'Business Partner Meet 2019'



In Touch with Indonesia



Seminar in Banyuwangi: the fishing hub of Indonesia

Did you know? More than 75% of canned fish supplies in Indonesia come from Banyuwangi in East Java, apart from being exported overseas. Leveraging the potential of the region to promote its offerings, Thermax recently organised the *In Touch* programme. About 10 key customers from the area attended the seminar, where the sales team from Indonesia presented Thermax offerings spanning heating, cooling, air pollution control, and water & waste solutions. The event witnessed interactive and engaging discussions on how our solutions can help customers increase their productivity, improve efficiency and meet the local environmental regulations; besides generating enquiries, mainly for water and waste solutions.



*Thermax
safety
team
at TLA*

NABET accredited training to check safety hazards

National Safety Council (NSC) conducted an Internal Auditor Course on SHE (Safety Health and Environment) Statutory Compliance at Thermax Learning Academy from 26-28 June, 2019. Through this specialised programme recognised by NABET (National Accreditation Board for Education and Training), 24 safety officers and divisional safety coordinators from Thermax were trained as internal auditors.

The three-day training comprised topics such as overview of safety audit requirements, policies and procedures associated with occupational safety

and health, various hazard identification as well as risk management; which were delivered by way of theoretical sessions, exercises and tests. Various legislative compliance queries raised by Thermax attendees were suitably addressed by the NSC faculties.

Participants received certification at the end of the programme, qualifying them to conduct audits within the organisation as per SHE statutory requirement. The event was inaugurated by Sharad Gangal, EVP, People Processes.



*Thermax Board of
Directors, CFO and
Company Secretary
on the stage*

*Shareholders at
the Yashwantrao
Chavan Academy in
Pune on 8th August
for the AGM*



Shareholders' meet 2019

The 38th Annual General Meeting witnessed exuberance with Meher announcing an all-time high revenue to shareholders and at the same time, there was an air of uncertainty due to the prevailing global and domestic economic challenges. Updates on overall company performance, Q1 results and milestones of FY 2018-19 were shared with the gathering involving shareholders, Board members, senior management and media. While highlighting some of the major projects executed during the year, a short audio-visual film on our largest export order for the biggest African refinery was played.

Living up to the energy efficiency cause



Thermax's team receiving the 'Most Innovative Energy Saving Product' award

Being a forerunner in the energy and environment space, Thermax supports several sustainability driven initiatives by industrial bodies. One such forum is the 'Energy Efficiency Summit' organised by CII-Godrej GBC (Green Building Council) which brings together the



A display of energy efficient solutions at the Thermax booth

latest green technologies across industries under one roof. At the 19th edition of the summit held from September 16 to 19 in Hyderabad, Thermax was a platinum sponsor and

showcased its energy-efficient offerings from the water & waste solutions, heating and solar portfolio. The event was attended by about 470 visitors and generated enquiries for our businesses.

Concurrent to this show was the 20th National Award for Excellence in Energy Management 2019 ceremony. Thermax's innovative and energy efficient 'Hybrid Heat Pump' developed by the Absorption Cooling division, received the prestigious 'Most Innovative Energy Saving Product', competing with over 100 entries in this category. Kudos to the team for living up to Thermax's vision of sustainability!



The day begins with fitness for employees from Cilegon factory

Striking a work-life balance

Going by the adage, 'A healthy mind lives in a healthy body', the team at PT. Thermax International Indonesia Cilegon factory has initiated morning exercises every Friday for all the employees before they start their workday. The team rightly believes that this initiative will help them stay healthy, active and contribute better to the organisation.

'Customer Connect' series tours all corners

The Channel Business Group (CBG) has embarked on a 'Customer Connect' series to reach out to customers spread across diverse geographies; gain insights into their business needs and present solutions from Thermax to improve their processes. During the quarter, several such meets were organised in strategic clusters across the country.

A customised session on product from the Absorption Cooling and Heating business was conducted in Delhi at the India Habitat Centre for industries situated in the northern belt of the country. Rudrapur's seminar had the highest gathering of 150 customers who learnt more about our solutions from heating, steam engineering and solar PV.

The customers in the South were invited for seminars at Bengaluru and Hyderabad. In Bengaluru, the event

was inaugurated by Mr. K. M. Pratham, Joint Director of Boilers, Government of Karnataka and attended by over 68 customers from all major industries; while the Hyderabad seminar was specific to sharing information on heat pumps and hybrid chillers with a footfall of 80 customers from 48 companies.

Addressing the fishing, packaging and hospitality sectors in the eastern region, the Customer Connect series traversed to Bhubaneswar where we presented our indigenously manufactured evaporative condensers and closed loop cooling towers to over 50 customers.

This series is a welcome initiative, reflecting customer centricity and increasing market reach with a 'One Thermax' approach.

Customers in Bhubaneswar learning about Thermax's process cooling solutions



Mr. K.M. Pratham lighting the ceremonial lamp

Know-how series



'We are stronger when we listen and smarter when we share'. In the perspective of continuous learning, sharing and enriching the knowledge of our sales teams across the globe, the Absorption Cooling and Heating marketing team has introduced the Know-How webinar series since June 2019.

Through these monthly webinars, subject experts from the division share knowledge on various topics spanning products, technology, competition, etc. and build engagement. At the end of each webinar, a poll is conducted to gather suggestions for the next session, which helped in developing tailored modules.

IoT brings comfort to guests at Cultural Heritage Resorts

Cultural Heritage Resorts, a part of a reputed Sri Lankan hotel chain, recently partnered with Thermax to adopt an energy-efficient and sustainable approach for providing air conditioning. The resort is using Thermax's double effect steam-driven vapour absorption chiller of 300 TR capacity, helping them save 4,92,000 units of electricity and reduce carbon emissions by 318 tons annually; equal to planting 31,885 trees or taking 63 cars off the road. The chiller utilises steam generated from biomass boiler to provide

comfort cooling to hotel rooms through AHU/FCU units.

Understanding the criticality of comfort in the hospitality industry, Thermax is also supporting the chiller with its IoT based service, 'ROSS' (Remote Online Support Service), which monitors and controls performance of absorption chillers across the globe.

An abnormality was observed in the chiller installed at the Cultural Heritage Resorts due to operational issues. It was detected that vacuum was not within the

Thermax's 300 TR chiller



required limit, resulting in the VAM outlet temperature not being maintained at the set point. Our smart service 'ROSS' proactively captured data, detected the root cause and avoided breakdown in air conditioning which would have caused discomfort to guests. Thermax's experienced service engineer highlighted the issue to the customer and resolved it online by assisting the team to perform blowdown in the vacuum. This has resulted in significant cost savings to the hotel with no downtime.



Together we win

“With the heating products' global footprint expanding continually, it is more important than ever to keep introspecting, upgrading and offering the best-in-class solutions to our customers,” said Rakesh Tripathi, Business Head - Heating, while addressing

Vendor connect: aligning expectations and communicating needs

over 120 top vendors of the division who gathered for a meet on 3rd and 5th July 2019 in Pune. The theme of the event was 'Together We Win for Sustainable and Profitable Growth', where Thermax and its supplier partners engaged in a structured discussion to understand each other's concerns and expectations; and analyse the current market situation to be able to compete in local as well as global markets.

The focus of the event was to work together in offering high-quality products and quick service support to customers; increase manufacturing capacity and reduce non-value added cost/waste from day-to-day work.

The programme concluded with vendors sharing their feedback about Thermax, and many of them appreciating their partnership with the company for over two decades. Some of the suppliers have also started supporting our Indonesia facility.



Starting Thermax journey on a social note

Social responsibility has always been an integral part of Thermax culture and what could be a better way to pass on the baton to the millennials of the company than an exposure to the same during their induction.

The new batch of Graduate Engineer Trainees (GETs), Graduate Apprentices (GAs) and Diploma Engineer Trainees (DETs) were given an experiential orientation towards corporate social responsibility during their induction programme in the month of July and September.

GAs were assigned a unique activity of preparing handmade study material sheets for slow learners, designed originally by experts based on multiple intelligence theory of Howard Gardner. The group completed as many as 350 sheets which were dispatched to the NGO the same day.

DETs visited Shree Shirdi Sai Baba Home for Blind Women. They spent quality time with the ladies, served them food and were inspired to see them making bags with multiple coloured plastic strings,

GETs engaged in making paper bags



flawlessly and swiftly, displaying their determination despite their limitations.

GETs were given the task to make paper bags from newspapers, calendars or used chart papers as an alternative to polythene bags and sell the bags to the employees present at the Thermax Learning Academy (TLA) for promoting both environmental and social cause. The proceeds from this unique sale were given to an NGO.

Birdhouse to bring back the disappearing birds



Along with the NGO, 'Give me Trees', Thermax Delhi office participated in a CSR initiative of making birdhouses from unused bottles, boxes and balloons, supporting the NGO's mission of reviving the flora and fauna. During the process, a lot of questions related to the ecosystem, birds and plants were answered, and learnings were acquired by the team while interacting with the experts. The volunteers agreed to build a few more similar ones, with the help of family and friends and hang them on trees in their vicinity during the next phase of the activity.



AWARDS & ACCOLADES



Anu honoured with the Power Brands: BMVP Award

"Apart from good results, we also inculcate good values which to me are very important than any academic results so that the students become responsible, caring and honest citizens. We also ensure that they look at each other as human beings and not be prejudiced by looking through the lens of gender, caste, religion or region," said Anu Aga on her association with the two NGOs – Akanksha Foundation and Teach for India at the 'Power Brands: Bharatiya Manavata Vikas Puraskar (BMVP) – Edition 2019' held on August 30, 2019 at New Delhi. At the event, she was honoured with the Power Brands: BMVP award by Shri Pranab Mukherjee (former President of India) for her business leadership and philanthropy.



Lifetime Achievement Award – for Best Supply Chain Management Practices

Thermax was honoured with the 'Lifetime Achievement Award – for Best Supply Chain Management Practices' by Indian Institute of Materials Management at its 6th Annual Awards for Supply Chain Management, Pune. Though the award selection is done after evaluating the nominees through rounds of interviews followed by site visits, Thermax was conferred this recognition without filing a nomination. The positive feedback received by the panel of juries about Thermax from the industry and peers led to this decision.

Mangesh Patil, Jaydeep Datye and Prashant Kulkarni from Corporate Sourcing received the award on behalf of Thermax.

Clarivate Analytics India Innovation Awards 2019

Thermax won the 'Clarivate Analytics India Innovation Awards 2019' in the 'Heavy Industries' category. The impressive performance of its growing patent portfolio across all judging criteria, especially its success in acquiring patents and globalisation, resulted in this win for Thermax. This recognition is based on extensive patent portfolio analysis of almost 250 organisations that are headquartered in India and have more than 25 India priority patent publications across 2016-2018.



Craft Drinks India 2019

Craft Drinks India is India's first and comprehensive trade show and conference conceived to cater to the production needs of the alcohol industry. Debuted in 2018, this year the event was held on 3rd and 4th July at Bengaluru. Thermax showcased its offering from the Heating, Cooling, Water & Waste Solutions and Process Cooling divisions for the brewery industry. The event had a footfall of around 70 customers across India and generated business opportunities. Vedvati Raje, Marketing Head, Thermax gave a presentation on our solutions and benefits during the conference, organised in parallel with the event.



Expo Boiler 2019

PT. Thermax International, Indonesia participated in the Expo Boiler from July 11 to 13, 2019. It is Indonesia's first international trade show focusing on industrial boilers, right from showcasing components and accessories to services. The key attraction of the Thermax booth was the TEON 1000 boiler which grabbed attention of visitors from diverse sectors and generated enquiries.

The second day of the expo saw presentations from industry experts where Pardamean Siahaan from the International Business Group (IBG) presented on the topic 'TEON Mini Boiler for SME: Value for Money'.



Vietwater - Hanoi, Vietnam

Thermax's Chemical division along with its business associate participated in one of the leading trade exhibitions in the water industry, Vietwater from July 24-26, 2019 in Hanoi, Vietnam to showcase its products in industrial water applications. Thermax booth saw visitors from various parts of Asia, and our forte in energy and environment solutions drew appreciation from industry experts.



Akshay completes his Ph.D. in Chemistry



Akshay Raut

Akshay Raut, son of Hemant Raut from the Quality Assurance department of Thermax Cooling Solutions has completed his Ph.D. in Chemistry from Ruhr University Bochum, Germany in July 2019.

The topic of Akshay's thesis was 'Matrix Isolation Study of Reactive Intermediates at Cryogenic Temperatures'. While pursuing his Ph.D., he has published several articles in scientific journals. One of his recent works on 'Reactions of Arylcarbenes with Lewis Acids' has been featured in ChemistryViews, a chemistry magazine published by Wiley-VCH's, a well-known German publisher.

Akshay has been selected for fully funded post-doctoral studies at ETH Zurich in Switzerland. His hobbies include reading, acting and cooking.

Ameya strikes a perfect balance between studies and passion

Ameya Ranade, son of Abhay Ranade from the Legal & Taxation department has completed his B.E. in the Chemical stream, securing a 'First Class with Distinction' with a CGPA of 8.67 from the University of Pune. Simultaneously, he has also completed his 'Tabla Visharad Poorna' (Bachelors Degree in percussion instrument, *Tabla*) with a First Grade from Akhil Bhartiya Gandharv Mahavidyalya, Mumbai Region in June 2019.

Ameya will now pursue his Master's in Process Engineering from the Delft University in Netherlands.



Ameya Ranade

Army White Water Rafting enters India Book of Records



STATE TIMES NEWS
LEH: A 27-member team of Parashu Brigade led by Capt Hrishikesh Ghogare, who undertook a White Water Rafting Expedition on Indus from Nyoma to Nima spanning a distance

of 210 Km to commemorate 50 Years of Kargil Vijay Diwas (Operation Vijay), was flagged in on Monday at Nima. The team that started the expedition successfully completed the course of

210 Km, which has been registered in a National Record in India Book of Records, an army release said.
The expedition, which was flagged off on July 12, 2019, by Major General Arvind Kapoor, Chief of Staff, Five and Para Corps, traversed altitudes varying from 13,700 feet to 16,200 feet, negotiated number of grade four rapids, enduring inclement weather and sub-zero temperature of Indus River.
The expedition team displayed the ever undeterred spirit of the army as a mark of tribute to the heroes of Kargil War.



Captain Hrishikesh Ghogare

Captain Hrishikesh sets a National Record

A white water rafting expedition was conducted by Parashu Brigade in the Ladakh Region to commemorate 20th Kargil Vijay Diwas, named after the successful 'Operation Vijay' or Kargil War when India successfully recaptured the high outposts in Kargil from Pakistan.

A 27 member team of rafters from Three Medium Regiment was led by Captain Hrishikesh Ghogare, who is presently serving in the high altitude area of the Ladakh region since June 2017. He is the son of Sujit Ghogare from B&H Materials department, working with Thermax for 12 years.

The team set a National Record for 'Longest White Water Rafting' in Indus River at an altitude of 13,000 feet+ covering a distance of 210 km in sub-zero temperatures of the river. This record was validated by a team of adjudicators from India Book of Records.

The expedition team displayed the undeterred spirit of the Indian Army as a mark of tribute to the heroes of the Kargil war.



This economist has a plan to fix capitalism. It's time we all listened!

.....
Mariana Mazzucato has demonstrated that the real driver of innovation isn't lone geniuses but state investment. Now she's working with the UK government, EU and UN to apply her moonshot approach to the world's biggest challenges
.....

The idea that made Mariana Mazzucato one of the most influential economists in the world came to her in early 2011. It had been three years since the financial crisis of 2008 and, in the UK, the coalition government of Conservatives and Liberal Democrats had chosen to pursue a fiscal policy of austerity that was forcing councils to cut back public services and leading to a rise of homelessness and crime.

What particularly infuriated Mazzucato was the prevailing narrative that such cuts were necessary to boost competitiveness and innovation. In March 2011, Prime Minister David Cameron gave a speech excoriating civil servants working in government, labelling them "enemies of enterprise". Later that year, in November, he visited the Truman Brewery in east London to announce his plans for a

new technology cluster called Tech City. "They were hyping up entrepreneurs and dismissing everyone else," Mazzucato says. "There was this belief that we didn't have European Googles and Facebooks because we didn't subscribe to Silicon Valley's free market approach. It was just ideology: there was no free market in Silicon Valley."

It was then that Mazzucato, an Italian-American economist who

had spent decades researching the economics of innovation and the high tech industry, decided to look deeper into the early history of some of the world's most innovative companies. The development of Google's search algorithm, for instance, had been supported by a grant from the National Science Foundation, a US public grant-awarding body. Electric car company Tesla initially

struggled to secure investment until it received a \$465 million (£380 million) loan from the US Department of Energy. In fact, three companies founded by Elon Musk — Tesla, SolarCity and SpaceX — had jointly benefited from nearly \$4.9 billion (£3.9bn) in public support of various kinds. Many other well-known US startups had been funded by the Small Business Innovation

Research programme, a public venture capital fund. "It wasn't just early research, it was also applied research, early stage finance, strategic procurement," she says. "The more I looked, the more I realised: state investment is everywhere."

Mazzucato included her findings in a 150-page pamphlet she submitted to UK policy think tank Demos. It was distributed to thousands

of policymakers, and received coverage in daily newspapers. "It was obvious that it had touched a nerve," she says. "The more I thought about it, the more I wanted to go straight to the core of the myths about innovation." She decided to dissect the product that symbolised Silicon Valley's engineering prowess: the iPhone.

Mazzucato traced the provenance of every technology that made the iPhone. The HTTP protocol, of course, had been developed by British scientist Tim Berners-Lee and implemented on the computers at CERN, in Geneva. The internet began as a network of computers called Arpanet, funded by the US Department of Defense (DoD) in the 60s to solve the problem of satellite communication. The DoD was also behind the development of GPS during the 70s, initially to determine the location of military equipment. The hard disk drive, microprocessors, memory chips and LCD display had also been funded by the DoD. Siri was the outcome of a Stanford Research Institute project to develop a virtual assistant for military staff, commissioned by the Defense Advanced Research Projects Agency (DARPA). The



Without the massive amount of public investment behind the computer and internet revolutions, such attributes might have led only to the invention of a new toy.

touchscreen was the result of graduate research at the University of Delaware, funded by the National Science Foundation and the CIA.

“Steve Jobs has rightly been called a genius for the visionary products he conceived and marketed, [but] this story creates a myth about the origin of Apple’s success,” Mazzucato writes in her 2013 book *The Entrepreneurial State*. “Without the massive amount of public investment behind the computer and internet revolutions, such attributes might have led only to the invention of a new toy.”

But a narrative of innovation that omitted the role of the state was exactly what corporations had been deploying as they lobbied for lax regulation and low taxation. According to a study by Mazzucato and economist Bill Lazonick, between 2003 and 2013 publicly listed companies in the S&P 500 index used more than half of their earnings to buy back their shares to boost stock prices, rather than reinvesting it back into further research and development. Pharmaceutical company Pfizer, for example, spent \$139bn (£112bn) on share buybacks. Apple, which had never engaged

in this type of financial engineering under Jobs, started doing so in 2012. By 2018, it had spent nearly one trillion dollars on share buybacks. “Those profits could be used to fund research and training for workers,” Mazzucato says. “Instead they are often used on share buybacks and golfing.”

That posed an urgent, more fundamental problem. If it was the state, not the private sector, which had traditionally assumed the risks of uncertain technological enterprises that led to the development of aviation, nuclear energy, computers, nanotechnology, biotechnology and the internet, how were we going to find the next wave of technologies to tackle urgent challenges such as catastrophic climate change, the epidemic of antibiotic resistance, the rise of dementia? “History tells us that innovation is an outcome of a massive collective effort – not just from a narrow group of young white men in California,” Mazzucato says. “And if we want to solve the world’s biggest problems, we better understand that.”

One of Mazzucato’s most enduring memories of her childhood is watching her father

Ernesto, a nuclear fusion physicist at Princeton University, yelling at the news. She would say, “Dad, that’s just information,” to which he would reply: “That’s not information, that’s just what they’re trying to make you believe.” “A critical eye was the first thing my dad instilled in me, mainly just from watching him swear at the TV,” Mazzucato says. After the publication of *The Entrepreneurial State*, Mazzucato, an effervescent woman in her late forties, became a regular on current affairs programmes, often delivering devastating critiques of commonly held economic beliefs with eloquence.

That the message at the core of her book had resonated with a general audience didn’t necessarily surprise Mazzucato. “Silicon Valley entrepreneurs rarely acknowledged that they were standing on the shoulders of giants. It was a call to arms to innovators to sort of step up and acknowledge that,” says Saul Klein, co-founder of venture capital firm LocalGlobe. “There has been a very concerted effort, over the past 40 years, to build this intellectual construct that was sold to government and sold to society about the free market, supported by businessmen who

In the report, she illustrated what missions could look like with three hypothetical examples: a plastic-free ocean, 100 carbon-neutral cities by 2030, and cutting dementia by 50 per cent.

were trying to tell a story that was advantageous to them,” says tech mogul Tim O’Reilly. “It’s now very clear that there’s something wrong with the story. We need a new theory to replace this, and Mariana is one of the economists trying to build a rival narrative.”

Mazzucato was surprised to find supporters inside the coalition government. “To be honest, given that I had mainly written academic things, there was no real risk that I sounded like a communist,” she says. That support came in the form of Business Secretary Vince Cable, who founded the Catapult centres to promote partnerships between scientists and entrepreneurs; and the “eight great technologies” investment announced by David Willetts, Minister for Universities and Science. “There’s been a gap in conservatism in offering a constructive account of the role of the state,” Willetts says. “Mariana provided an account of the role of government which was neither one of minimal government nor traditional socialism. I was able to say in government, hang on, this isn’t some experiment with left-wing socialism. This is what happens in Republican America.”

Mazzucato was increasingly interested in what she called

mission-oriented organisations. The prime example was DARPA, the research agency founded by President Eisenhower in 1958 following the Soviet Union’s launch of Sputnik. The agency pumped billions of dollars into the development of prototypes that preceded commercial technology such as Microsoft Windows, videoconferencing, Google Maps, Linux and the cloud. In Israel, Yozma, a government-backed venture capital fund that ran between 1993 and 1998, supported more than 40 companies. In the UK, the Government Digital Service, launched in 2010, was behind the award-winning .gov.uk domain, saving the government £1.7bn in IT procurement. “When I use the word ‘state’ I am talking about a decentralised network of different state agencies,” she says. When such agencies are mission-oriented to solve problems and structured to take risks, they can be an engine of innovation.”

To Mazzucato, the epitome of the mission-oriented concept was the Apollo programme, the space programme designed to land Americans on the Moon and return them safely to Earth. Between 1960 and 1972, the US government spent \$26bn

(£21bn) to achieve precisely that. More than 300 different projects contributed, not only in aeronautics but in areas such as nutrition, textiles, electronics and medicine, resulting in 1,800 spinoff products, from freeze-dried food to cooling suits, spring tyres and digital fly-by-wire flight control systems used in commercial airplanes. The programme was also instrumental in kick-starting an industry for the integrated circuit, an unproven technology at the time, and other space projects such as the Space Shuttle and the International Space Station.

The modus operandi of these mission-oriented institutions provided Mazzucato with an alternative vocabulary that told a different story about the role of the state. “Economics is full of stories,” she says. “Words like ‘enabling’, ‘facilitating’, ‘spending’, ‘regulating’ – they create a story of the state as boring and inertial. It becomes a self-fulfilling prophecy. We need a new narrative to guide better policies.” These mission-oriented institutions were actively creating and shaping markets, rather than merely fixing them. They were ambitiously seeking high-risk directions for research and investment, rather than outsourcing and avoiding uncertainty.

The European Commission had traditionally framed its policies in terms of grand challenges, but Mazzucato's concept of missions translates these into concrete projects: the Cold War was a challenge; landing on the moon was a mission. In February 2018, she published a report — titled Mission-Oriented Research & Innovation in the European Union — that defined five criteria missions should obey: they must be bold and inspire citizens; be ambitious and risky; have a clear target and deadline (you have to be able to unambiguously answer whether the mission was accomplished to deadline or not, Mazzucato says); be cross-disciplinary and cross-sectorial (eradicating cancer, for example, would require innovation in healthcare, nutrition, artificial intelligence and pharmaceuticals); and allow for experimentation and multiple attempts at a solution, rather than be micromanaged top-down by a government.

In the report, she illustrated what missions could look like with three hypothetical examples: a plastic-free ocean, 100 carbon-neutral cities by 2030, and cutting dementia by 50 per cent. The clean oceans mission could involve removing half of the plastic

already polluting the oceans and reducing by 90 per cent the quantity of plastics entering them before 2025, through projects such as autonomous plastic collection stations or distributed nets. The solution would require inventing alternatives to plastic, designing novel forms of food packaging, and creating AI systems that could separate waste automatically. "These were just examples to tease out the difficulties," Mazzucato says. "When people talk about missions, I always warn them: if this is something that makes you feel comfortable and happy and cosy, then you haven't understood it, because it's actually about fundamentally changing how we think about innovation."

At a talk at NASA, where Mazzucato has been working as part of a group studying the low-Earth orbit economy, she urged them to recover the ambition befitting an agency of its calibre. "I don't think many people realize that Novartis, one of the richest pharmaceutical companies in the world, is working for free on the International Space Station," she says. "Who thought that up? Charge them. Or make sure the relationship is symbiotic, not parasitic."

In May, the European Parliament voted and approved Mazzucato's mission-oriented proposal for the Horizon Europe programme. After a lengthy consultation period, five mission areas were chosen: adaptation to climate change; cancer; healthy oceans, seas, coastal and inland waters; climate-neutral and smart cities; and soil health and food. The European Commission will now appoint a mission board of 15 experts for each area. They will be responsible for identifying the first specific missions, following Mazzucato's criteria. "Moedas jokingly offered me the role of chief muse of missions," she laughs. "That report was the most important thing I've written. It's now a legal instrument, it can't be undone unless another vote is had." She pauses. "I've influenced politicians, but having a parliament vote on something I wrote is just fantastic," she continues. "That's what I want: to bring about change."

By: Joao Medeiros

Source: <https://www.wired.co.uk/article/mariana-mazzucato>



How my little village transformed the hills

I'm sure many of you may not have heard of the village of Majale. It's a small village near Kolhapur in Maharashtra. That's my home and we are a small community of around 3,500 people who live there and are predominantly engaged in farming. Our village is located in the rain shadow region, with an average annual rainfall of around 300 to 400 mm. Sadly, this isn't enough and it never takes us all the way till the next monsoon. By January, our village starts to suffer a lot of hardship as the lakes and bore-wells, as deep as 350 to 400 meter go dry. The scarcity of water persists despite the presence of three lakes in the area and the mountains are barren and dry with only a little shrubbery in a few places. This had become a problem that was affecting the livelihood of my people. We longed for a solution, but there seemed to be none.

An idea takes seed

It all started in February 2018, when an old friend visited my village to attend a function. The Pimpri Chinchwad Municipal Corporation had recently honoured him by bestowing the title of 'Nature's Friend' upon him. As such, he was well-known and revered in our community. During his visit, he made an observation that made a big impact on me. He simply said, "You have beautiful mountains in this area, but they are all barren". For me, this was a wake-up call. I started thinking about what we could do to change this. I called upon some of my friends in the village and coincidentally, they too were planning on finding a

solution. So, we joined hands and formed a group with a firm resolution to do something about this problem.

The need of the hour for our group was to connect with experts who had successfully implemented such projects in other villages. So, we started to collect information and arranged visits to villages like Velu and Hivre Bazaar to witness the results of their projects first-hand. We also managed to get some renowned speakers to come in and motivate people to join our work.

The winds of change start blowing

We started out by creating continuous counter trenches (CCT) and deep continuous counter trenches (DCCT) on the slopes of the hills, but our greatest challenge turned out to be the lack of participation by villagers. Some people came forward, but it wasn't enough. Demoralised, our team members started talking about abandoning the project. But, we didn't give up. We came up with the idea of using social media to send out messages and images of the good work that we were doing. We desperately needed more hands to dig the trenches with us. Slowly, more people came forward, including a few NGOs. Our project gained momentum and we managed to get funding to bring in machines from the NAM foundation and JCB India. The machine operators were hosted by families in our village, who joyously served all the meals of the day, including mid-day tea. Lodging was also arranged by the Gram Panchayat. Now, the work started progressing furiously and this created a lot of interest amongst the

residents of our village. Many came forward and donated funds that had been kept aside for marriage anniversaries, children's birthdays and other family occasions.

With a little help from our friends

A huge breakthrough was achieved on 1st May - Maharashtra Day. We visited a few industries and institutes in the area and appealed for 'Shramdan' - voluntary labour. To our surprise, one of the companies deployed around 400 workers and an institute sent 800 students. As you can imagine, the work was now progressing speedily. Within the next four months, we achieved rehabilitation of two lakes and dug out 7 km of DCCT and CCT. The water holding capacity of the lakes had gone up to 4.5 and 3.9 crore litre, respectively. On the other hand, the trenches were capable of holding 7 crore litre of water.

Success at last

Excitement was in the air as we waited for the pre-monsoon rains and once the monsoon set in, our area received approximately 350 mm of rain from June to August. The reservoirs we created were now full of water and we had enough agriculture and drinking water all the way till June 2019. The rain gods smiled on us once again in 2019, as we received 550 mm of rain. At last, our village had become self-sufficient.

Our pride and joy

It gives me great joy to share this wonderful story with all of you. We did all this by spending a few lakhs, within 4 to 5 months. Every person in my village today is proud of what we have done. But we haven't stopped at just that. We are now focusing on growing grass all over the mountain and have completely stopped the felling of trees and cattle grazing on the slopes. Once the grass has grown fully, it will stop land erosion and create an entire ecosystem of insects and birds. We also expect more plants to take root through pollination and the growth of several diverse species of shrubbery. We even had celebrities like Nana Patekar, Makarand Anaspure and Satyajit Bhatakale spent their valuable time championing our cause. Our mountains are green again and I am proud that it's all the fruit of our own labour!



– **Shanitinath Patil**
(TBWES)

THERMAX: A GREAT COMPANY TO WORK FOR

After completing my engineering degree from IIT Bombay, I spent a very interesting and eventful period in a large engineering PSU for 18 years. I was getting used to the comfort zone. This is a typical state where you are bereft of challenges. Before lethargy sets in, I needed a change and started looking for options.

During my subsequent trip to Pune in early 1992, I visited TBW (the present TBWES) and after meeting with the concerned people, decided to start a new innings in their field engineering department. This news was received with mixed feelings by my colleagues. While some congratulated me, others were apprehensive about my decision

to leave the safe ocean of a public sector giant (turnover 3,000 crore) for the uncharted waters of a relatively small private company (TBW turnover at that time being around 30 crore). But I was excited and looking forward to this change.

I shall never forget my first day in TBW. After completing the joining formalities, I was asked to report to Mr. Oak, Head of Field Engineering. After the preliminary icebreaking chat, I was asked to pay a visit to an ongoing site in Bhosari where an oil fired boiler was being erected.

My last posting in my previous organisation was at a 3 x 500 MW power plant. You can imagine my shock on seeing the TBW oil fired

boiler at Bhosari. It was a package boiler in a 5m x 5m enclosure! All apprehensions of my erstwhile colleagues flooded my mind, and I had serious doubts about my decision. But after some reflection, I decided to leave the ocean behind me and plunged head-on into the TBW sea.

Over a period of time, I found that TBW was a wonderland of boilers! There were so many types of boilers that I had never heard of. Each new project was unique, a discovery, learning and a challenge. My earlier stint instilled a specialist culture, making you a master of only one, but in TBW I realised we had to be a jack of all and master of some! The projects were small in

comparison, but the exposure was tremendous!

One more striking difference I noticed was that in other companies no matter how senior you are, there was always somebody above you to make decisions and it was expected that your senior would take the required decisions, leaving you free of worries. Therefore, my first few months in TBW were difficult as I tended to seek Mr. Oak's intervention in most of my work as I had been indoctrinated to behave so. One day he called me and explained to me that I had full powers, authority and responsibility to make decisions regarding my work and it is not expected that I shall encroach upon his time to carry out my job.

I got the message. From then on working in TBW was a joy! But sometimes it was like a mad house as the pressures and challenges were high. I was surprised to see that there was hardly any hierarchy. All the people were on first name terms as against the yes sir, sure sir, right away sir culture. The open door policy in TBW encouraged subordinates to approach seniors freely. Even our MD's cabin door was always open.

Here I got the opportunity to interact with our American B&W deputies and in the process, gained valuable guidance in conflict management. Their management style was informal and if they needed to discuss something with you, they would come to your workplace and not summon you to their cabin.

As the days passed, I found myself getting used to working in the informal and at times chaotic environment of TBW. I experienced the pangs of working in a growing organisation and growing along with it. The growth of TBW over the years was phenomenal and with it came computerisation, systems and procedures, ISO and ERP and along with it came orderliness.

TBW was growing steadily under the able guidance of our MD, Mr. Prakash Kulkarni. He had a very endearing style of functioning, taking all of us together, always engaging the HODs in shaping the company's policies and involving them in critical decisions. He would cajole us to experiment, to stretch, to walk that extra mile so that we remained ahead of the competition. It is this spirit of TBW and Thermax as a whole which was so enjoyable! Thermax is one of the very few professionally managed family businesses of India.

In TBW, I saw that people did not believe that the boss is always right. The work culture encouraged healthy dissent in the interest of the job which is very rarely seen in the industry. Here I found that the guiding principle in dealing with subordinates was that every individual is taken to be sincere and honest unless proved otherwise. Trust and delegation were the hallmarks of the work culture, encouraging individuals to unleash

their potential. Merit and hard work were rewarded. There were plenty of opportunities for individual development through mentoring and technical, behavioural and managerial training.

After spending 13 years in TBW, I left for another organisation but I realised that after working in TBW, it is extremely difficult to work anywhere else. I returned back to Thermax within a year. After my superannuation from Thermax I spent three years managing a 600 MW power plant but always missed the Thermax culture.

Now that I have hung up my boots, I look back fondly to the time I spent in Thermax. I shall always remember Thermax as a company which is caring but firm with its greatest asset - its employees. A company that brings out the best in you, enabling you to always better yourself.

Even today when I see Thermax in the news for some feat or achievement, my heart swells with pride for once being a part of this wonderful organisation. Thermax and its employees have a great future indeed!



– Jayant Sagade
(Ex-Thermaxian)



Kalsubai

– A trek in the clouds

There's an old saying that 'health is worth its weight in gold'. This is clearly a belief that my colleagues from B&H Materials and I hold in good stead. Fitness has always been close to our hearts and over the last year, our team has taken concrete steps to stay fit. It's really all about challenging oneself and getting out of the comfort zone by performing activities that are likely to improve your overall fitness. This was the motivation that drove us to climb Maharashtra's highest peak – Kalsubai. At 5,400 feet above sea level, it is a considerable challenge to reach the top.

We started preparing for the summit since February 2019 with weekly treks to the Sinhagadh fort in Pune along with two hours of cycling everyday. These regular fitness activities increased our endurance and stamina levels.

So it was that on 13th September our team – Ganpat Masal, Sagar Kumbhar, Amol Bendale and Mahesh Kulkarni from B&H Materials started out at eight in the morning. We were all quite excited to undertake the journey and the adrenaline started pumping through our veins as we drove through the chilly monsoon winds. Around 3 pm, we reached Bhandardara, 180 km from Pune. The drive to Bhandardara had been quite picturesque. The monsoons in Maharashtra bring out a riot of colors across the countryside. We saw lush green fields, blue ridge mountains and fields teeming with red and gold

flowers. We stopped thrice to get views of the Wilson Dam, which was once a beautiful lake next to the woods, and now serves as a huge reservoir of rainwater. The dark rocky hills around the lake were covered in greenery and we could see the clouds floating on top. It almost seemed like images from a picture postcard. We wondered if the peak of Kalsubai was hidden somewhere up in those clouds and whether we would see it. Eventually, we reached the small village of Shendi, just 8 km away from the base of Kalsubai. Here, we had to stop for the night.

We arose early the next day, ready to continue with our adventure. We traveled to the base village, called Bari, where we were joined by another three colleagues from our team. Abhijit Raskar, Ganesh Dhas and Santosh Mane had traveled separately and were waiting for us at Bari. So, we commenced our journey on foot. This is what we had been waiting for. The climb might have been easier at other times of the year, but we were in the middle of the monsoons. The path was steep, treacherous and slippery. Moreover, our vision was obstructed by the swirling clouds of mist, making the climb even more challenging. We passed a temple dedicated to Kalsubai Devi and prayed for our safety. Sometimes, we sank into the mud and the loose rocks made us slip back. As we climbed higher and higher, the clouds became even thicker. We had a feeling that we were out to accomplish something quite amazing and the hardship was really worth it. At certain points, there

were iron ladders, but climbing them was unnerving as they overlooked the deep chasms right next to them. The higher we climbed our visibility became poorer due to the thick mist. But, amazingly, every time the mist cleared, we could see white, violet and pink blossoms all around us. It was like being in 'wonderland'. Finally, we embarked on the climb to the summit. The heavy winds beating on our faces made the climb even harder. It took us almost 2 ½ hours from this point, but we made it! We reached the top and stood on the peak of Kalsubai - the highest peak in Maharashtra!

We visited the temple of goddess, Kalsubai after whom the peak has been named. Enjoying the cold and heavy wind there, we felt like being on top of the world, literally! The climb down was even more dangerous, and after slithering and falling all over the place, we made it back just in time to have *kanda bhaji*, lemon juice and a refreshing shower underneath a natural waterfall. We had traversed a distance of 13 km on foot and it had taken us approximately five hours but left us with fond memories forever.



Ganpat Masal
(B&H Division)

Slice of Life



Faking death for a better life

A South Korean service is offering free funerals – but only to the living. More than 25,000 people have participated mass “living funeral” services at Hyowon Healing Center since it opened in 2012, hoping to improve their lives by simulating their deaths.

“Once you become conscious of death, and experience it, you undertake a new approach to life”, said 75-year-old Cho Jae-hee, who participated in a recent living funeral as part of a “dying well” programme offered by her senior welfare center. Dozens took part in the event, from teenagers to retirees, donning shroud, taking funeral potraits, penning their last testaments, and lying in a closed coffin for around 10 minutes.

Source : *The Economic Times*

Even the gods can't help pollution

With air quality worsening by the day, devotees in the holy city of Varanasi are helping gods avoid toxic air by covering the faces with anti-pollution masks.

"Varanasi is a place of belief. We treat our idols as living deities and take pains to make them happy and comfortable. In summer, the idols are slathered with sandalwood paste to keep them cool and in winter, we cover them in woollens. Likewise, to save them from pollution, we have put masks on their faces," said Harish Mishra, a priest at the temple.

"Looking at the covered faces of their deities, many devotees visiting the temple have also started wearing anti-pollution masks," Mishra added.

"Bad air did not deter the people from bursting crackers on Diwali. Now there is smog everywhere. Until people come together to change their habits, the situation will never change," he said.

Source: *NDTV*

And this pun picture



Cartoon by *Sandeep Shete*

Beat Air Pollution - #breathfree



“Environmental consciousness is not confined to a particular day but integral to the culture of the company”, said A.G. Kshirsagar on the occasion of World Environment Day on June 5, 2019. This year's global theme was ‘Beat Air Pollution’.

Employees took part in several activities that included planting saplings, slogan and selfie contests, and exhibited case studies, highlighting some of the outstanding work done by divisions in reducing carbon footprint. A record number of 4,823 saplings were planted at various Thermax locations and a few customer sites. Our leaders, M.S. Unnikrishnan and Sharad Gangal delivered speeches on the prevailing climate crisis and the need for each of us to take the onus of doing our bit for the environment. The winner of selfie content, Anand Talekar, shared his success story on achieving his fitness goals through commitment and perseverance. Parthasarathy M D was adjudged winner of the Slogan Contest.

The theme being closest to their business, the Enviro team leveraged the platform to launch a new initiative called 'Learning Insights', a periodic email communication to customers and employees to educate them on the catastrophes of pollution and ways to control it.



Exemplary projects rewarded at OPEX Convention



The second edition of 'OPEX Convention and Awards' held on 10th September, witnessed success stories that have led to improved efficiency and effectiveness of business processes. Over 100 entries were received from teams across SBUs and functions, showcasing first-of-a-kind as well as incremental improvements in operations.

After scrutinising the projects and one-on-one discussion with the participating teams, the jury members comprising the chief guest of the convention, Prakash Telang, Chairman - Kennametal Ind. Ltd. and TEMA Ind. Ltd., and Executive Council members - Sharad Gangal, Bill Shukla and B.C. Mahesh selected the top three winners.



During the convention, 30 case studies were exhibited at Thermax Learning Academy to facilitate cross-learning of best practices among businesses.

Apart from addresses by Meher and Unny that traced the journey of OPEX at Thermax and its relevance in shaping a high performing global organisation, Mr. Telang shared his perspective on the prevailing macroeconomic scenario, insights from his professional journey and the role of OPEX as a game-changer for organisations.



The Boiler & Heater (B&H) OEM business bagged the first position for improving the productivity of tube finning by 65% through process improvement.



B&H Services secured the second place for refurbishment and relocation of a 20-year-old 125 TPH Heat Recovery Steam Generator (HRSG), thus helping the customer save high CAPEX costs.



WWS - Standard Plant Group bagged the third prize for designing and developing skid-mounted, compact and cost-competitive Sewage Treatment Plant of varied capacities.