



The power of engineering

TCE Consulting Engineers has made its presence felt across India's infrastructural development space, from the nuclear energy and space programmes to the mining and water management sectors

There's a good reason why bright engineering graduates consider TCE Consulting Engineers (TCE) an excellent choice. Not only is it one of India's leading engineering consultancy firms, it is also one of the few that works on projects across sectors as diverse as the space programme and water management.

TCE is a place where engineers go beyond their textbooks to explore the cutting edge of technology, where innovation and experimentation are encouraged. The company has worked on building a fuelling machine for a nuclear reactor for the Nuclear Power Corporation of India, and automating the solid propellant fuelling for the Indian Space Research Organisation's space vehicles.

This unique profile is something the company is proud of. Chief executive officer and managing director AP Mull says, "We like doing one-off, high-end projects, such as nuclear or space engineering. And while we keep adding value in our regular projects, it doesn't require the kind of intense brainwork and expertise needed for these exclusive projects, which also give us a niche space in the industry."

This unique capability is partly due to the fact that TCE has nearly 50 years of experience. The company's roots go back to 1962, when it was set up as Tata-Ebasco Consulting Engineering Services to engineer a thermal power plant in Trombay for Tata Power.

After Ebasco pulled out, the company carried out projects for state electricity boards. Today TCE operates as a wholly-owned subsidiary of Tata Sons. It offers a wide range of multi-disciplinary services in project engineering across several sectors. It has completed more than 5,500 assignments, ranging from power (where it has engineered several power plants with a total installed capacity of over 41,000MW) to urban water supply and waste water management, and facilities for chemical and industrial plants.

A wide landscape

TCE provides engineering consultancy services in five business units: power, nuclear, chemical and industrial, infrastructure, and construction monitoring and control. The break-up of TCE's operations between these sectors varies from year to year, but power retains the biggest chunk. In the domestic market, the company has attained the number one position in the power sector. Yet one of TCE's strengths is its versatility. When in the period 2000-03, work from the power and the chemical industries took a dip, the company sustained itself by taking on new sectors and one-off projects. As Mr Mull points out, "Even if one sector was facing a downturn, the others helped us retain our position."

Since TCE operates in sectors that are basic for economic prosperity, all of its business units have growth potential. The power sector is key, but other areas — such as water and waste-water management, infrastructural development and maintenance, and the chemical and industrial sectors — are all big contributors. The construction unit has shown consistent improvement, and nuclear is the new sunrise sector, particularly since the Nuclear Suppliers' Group endorsed the Indo-US nuclear agreement last year.

Besides these core sectors, TCE is keen to extend itself in other areas. It began working in minerals and metallurgy three years ago to cater to the steel industry.

Architecture and town planning is another core strength. The company now plans to hive off this sector into a separate business unit so that it gets more focus and thrust. The company also intends to enter new areas: naval architecture (especially the structural and utilities aspects), aerospace engineering and agricultural engineering.

Innovative thinking

What drives the company along the path of growth and success is its culture of innovation. For instance, TCE

started and followed environment-friendly practices long before 'green engineering' became a buzzword in the west. "In the US, green engineering is just a fad, but we've been doing it for a while now; it's been a part and parcel of our engineering from the word go," says Mr Mull.

At TCE, the company is aware that its employees frequently use innovation in the course of a project. Today the company is trying to capture and acknowledge these instances of product or process innovation. Mr Mull says, "In each of the assignments that our engineers do, there is a lot of innovation but they don't realise it. We want them to come out of their shell. If there's something novel, then report it. We had a contest last year and picked four entries for recognition."

The initiative has been hugely successful. A year ago, TCE applied for intellectual property rights on its innovations by filing for nine patents.

Global footprint

Even as TCE has established a lead position in India, the company's reputation overseas is growing. It has successfully carried out several international assignments in South East Asia, the Middle East, Africa, Europe, Asia Pacific, Australia and the Americas.

Last year the company established a subsidiary at the Qatar Science and Technology Park in Doha, Qatar. The new company, TCE QSTP-LLC, will focus on applied research related to energy, water and material science.

Other places that TCE is looking at to set up new bases are Muscat in Oman and Abu Dhabi in the United Arab Emirates. "The reason we picked them to open offices is because these countries are headed for industrialisation. They are not just content with selling their oil or gas," says Mr Mull.

People matter

Over time, the company has grown from a handful of employees to over

2,600 highly qualified and experienced professionals from all fields of engineering. As TCE ventures into new businesses and new geographical areas, human resources remain the company's greatest strength as well as its biggest challenge. Getting new people, training and grooming them, aligning them to the Tata culture, these are key HR initiatives that TCE pursues.

There are lessons learnt here as well. Mr Mull recalls a time when the company stopped recruiting people at the graduate level, and as a result became too top heavy. "In this year's campus recruitment, we have taken almost 700 engineers. We have learnt that we should never stop bringing in new blood into the organisation," says he.

In contrast to other companies, TCE does not worry about attrition. "All those people who go out become our ambassadors. TCE has always been known as the best training ground domestically, and anyone who does a stint here is sought after. But still, we are trying to minimise attrition," Mr Mull says.



Some of the various TCE projects

Upbeat in the downturn

In the face of the global recession, Mr Mull remains positive. "This year, infrastructure — apart from the realty sector which has slowed down — shows the maximum growth potential. But even if this pattern changes, it doesn't affect us much because most of our people have generic engineering skills. Each of our offices is able to do any kind of project or a mix of projects."

TCE has reason to be upbeat. Last financial year, accruals were 50 per cent higher than the previous year; in December 2008, the company crossed a record accrual of Rs200 crore. "Growth is essential and it should be sustainable, and for that innovation is vital. That is why we are going to be driven by innovation," says Mr Mull.

Former Tata Sons chairman JRD Tata would have approved. In a speech in 1963, he had said, "Growing organisations in any field must constantly evolve, accept, or even seek new ideas, new visions, and new enthusiasms." The people at TCE Consulting Engineers intend to do just that. ●

Christina Fernandes