

# “Challenges are a must for healthy growth”

Power Today speaks to **Suresh Sarma, COO, Gactel Turnkey Projects Ltd**, and persons from other departments of the company to get an insight into the working of a major player in the cooling towers sector

What opportunities and challenges do you foresee in the cooling tower industry?

There are definitely a lot of opportunities for growth in the power sector. Opening of the economy has helped infuse private participation into power projects and effectively helped to multiply the growth of the power sector and thereby the cooling towers industry.

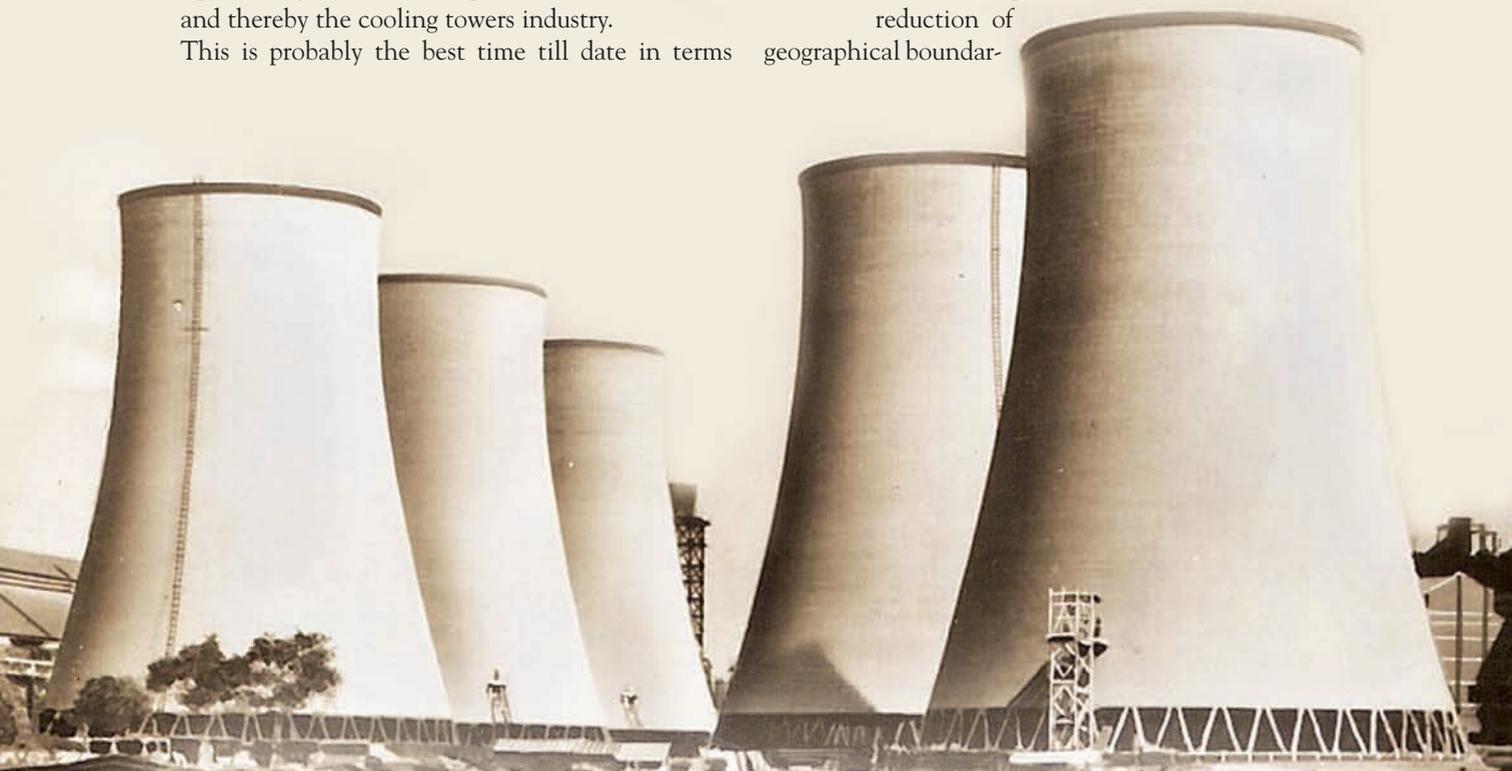
This is probably the best time till date in terms of geographical boundar-



SURESH SARMA

of growth of the cooling tower industry in India. A faster and more rigorous completion period helps improve the organisation's turnover.

Although the influx of other companies in this field has increased competition, it has also paved the way for availability of trained manpower in the industry. The reduction of



## Gammon India Limited

Gammon India Limited has been accredited with ISO 9001 certification for all fields of civil engineering works including design. It has designed and constructed bridges, ports, harbours, thermal and nuclear power stations, dams, high-rise structures, chemical and fertiliser complexes environmental structures, cross-country water, oil and gas pipelines. In 1934, Gammon built Asia's first natural draft cooling tower. The Gammon group has a turnover of approximately Rs 1350 crore for the financial year 2009-10 for the cooling tower and chimney vertical.

## Gactel Turnkey Projects Ltd

Gactel Turnkey Projects Limited (GTPL) is a wholly owned subsidiary of Gammon India Limited and was constituted to cater specifically to national and international requirements of cooling towers and cooling systems.

Some of their ongoing projects are Lanco Anpara C, Lanco Kondapalli, BHEL Pipavav, BHEL Anpara D, OMPL Mangalore, IOCL Vadodara, IOCL Haldia, HPL Haldia. It is also executing projects for Essar, ONGC, Thermax, Jindal Steel & Power, Vandhana Vidhyut Ltd, Anrak Aluminium Ltd, Adhunik Power and Gujarat NRE Coke among others.

SURESH SARMA, Chief Operating Officer (COO)

**What roadblocks do you face in terms of government policies and what would you suggest to alleviate the situation?**

The effects of government policy are:

- Any policy towards the power sector will definitely affect the cooling towers industry. At present, the major incentives that are given to this sector have a positive effect on this industry.
- Import subsidies for PVC products used in power projects will help lower prices of advanced heat transfer media and infuse better technology in the price-sensitive market. Incentives should be given for technology imports and transfer. Similarly, special R&D concessions in this field will help improve technology.
- Large vertical structures like NDCTs involve a

large amount of skill to work safely. The government along with industry specialists should start providing training to ensure honing of skills that are required in this industry.

- The short duration of completion coupled with high levels of security procedures, especially in refineries and other locations, have a huge effect on the cost of construction. Ways and means to reduce the time spent on this should be reviewed periodically with industry experts.
- R&D grants and incentives and waivers allotted by the government will give a big boost to technology.

**What are the other issues that ail the cooling towers industry?**

- Independent testing agencies to reduce biases.
- Absence of an independent governing body at the contractual stage to ensure speedy contract appraisal.

## TECHNICAL

SURESH SARMA, COO &  
RAM KUMAR JHA, R&D Manager

**Your tallest cooling tower (141 metres) is the one at Panipat. To what extent does the height of a cooling tower enhance its performance?**

We have already built taller cooling towers with Bellary NDCT being 143 metres and others being constructed being taller than 150 metres.

The draft available in the natural draft tower is directly dependent on the height of the cooling tower. So all other parameters remaining the same, the performance of the tower improves with the height of the cooling tower.

**Is there any latest technology that is being implemented abroad which you feel should be implemented here in India?**

Recent updates and global awareness in the field has now made this field smarter by adding a few remarkable innovations through in-house R&D being carried out within the country and abroad. Some technologies that GTPL & GIL implement to increase the effectiveness of cooling towers are mentioned below:

- Use of high-efficiency AMCA tested fans in mechanical draft cooling towers to help ensure sufficient air flow to the tower.
- Use of composite drive shafts effectively reduce the weight of this component and make the tower maintenance-friendly.
- Application of advance heat and mass transfer media with high efficiencies allow power saving for both the fan motor and for pumping water specifically in the range of dirty water and sea water application.
- The use of PM motors would enable direct coupling of fan to the motor, thus rendering the drive shaft and gearbox redundant.

ies has eased the flow of communication and paved the way for critical technological information to give us a better understanding of its finer aspects.

Challenges are a must for healthy growth. Future challenges are vital for improvement of technology, better efficiency and optimisation of the cooling towers and the overall power plant.

There are issues of human importance like sound control, plume abatement measures, providing for contamination free recirculation water, lower evaporation rates and prevention and cure of corrosion scaling in cooling towers. So it is a constant challenge to provide more efficient cooling systems while minimising their negative effects on the environment.



**SK ASTHANA,**  
Vice President

**What are your plans for the future?**

We plan to aggressively expand our share in the international markets. We are confident of penetrating the highly competi-

tive international markets with our dedicated team of experts, best technology, excellent in-house R&D and our proven track records of meeting deadlines.

We plan to expand our dry cooling tower division as we feel that this segment will grow rapidly in future due to water scarcity and environmental concerns.

In the wet cooling tower section, our R&D department in collaboration with reputed international agencies is working on development of improved heat and mass transfer surfaces to suit bad water quality and thus improve the cooling tower's performance.

At GTPL we understand the importance of completing projects within committed time schedules. Innovative methods of construction ensure that the effective utilisation of manpower and machinery is being constantly improved to achieve faster completion of projects, without sacrificing quality and safety.

We are also involved in latest developments in improving the efficiency of existing cooling towers by using technologically improved components thus improving the overall performance of existing plants.

We are targeting 20 per cent turnover growth per annum for the next three years.

**HUMAN RESOURCES**



**JAANHVI NAUTIYAL**  
Manager -HR

On staff strength, attrition rates, demand for skilled manpower and HR policies for the benefit of staff.

The majority of our staff are technical. In our head

office we have 20 engineers in our technical section, 12 engineers in project management, five persons in the purchase section, 25 in accounts and administration and 15 supporting staff. At the site we have 10 project managers and 50 engineers. Attrition rates are extremely low. Today, the percentage is as low as 14 per cent per year.

The demand for skilled manpower is very high since availability of skilled, experienced manpower is poor, especially in departments like tendering or marketing, thermal, operations and commissioning departments.

We reward employees who take on additional responsibilities and also give referral bonuses. We even provide counselling for family matters and organise extra-curricular activities.

**FINANCIALS**



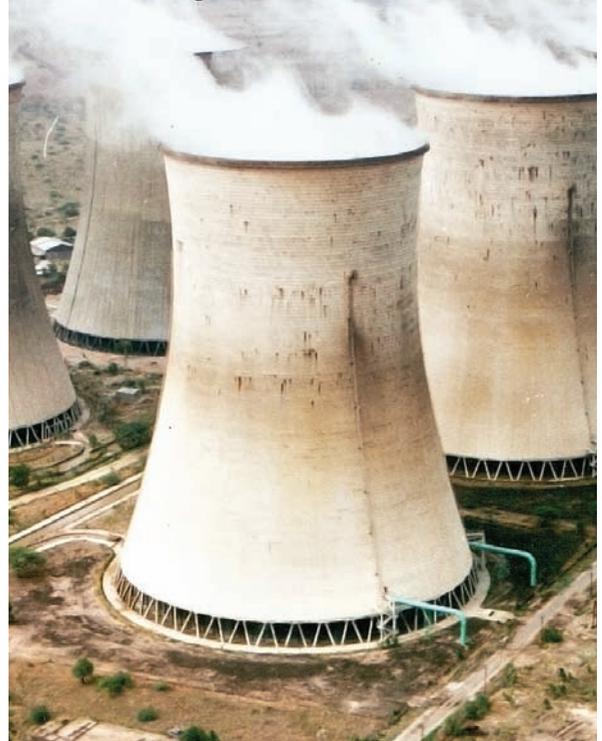
**GIRISH GOENKA,** AGM Finance

Total income, PAT, net worth and market capitalisation over the last three years

(Rs. In %)

Financial Year	2006-07 (Audited)	2007-08 (Audited)	2008-09 (Audited)	2009-10 (Estimated)
<b>Growth</b>				
In Income	N.A.	996.1%	244.6%	32.8%
In EBIT	N.A.	540.3%	91.4%	47.3%

**Raichur Cooling Towers 1995**



### What is the USP of your company?

The performance of cooling towers can be affected by multiple variables. We, at GTPL, are at present engaged in major R&D activities and have been associated with reputed international universities for assessment and development of latest heat and mass transfer surfaces in their highly advanced test laboratories and are also associated with scientists carrying out latest research in this field. We propose to set up a R&D cell to study the effects of various parameters on cooling towers and illustrate the same to our clients.

Gammon has built the maximum number of Natural Draft Cooling Towers in India and our experience in this field is unmatched in the country. By virtue of working with them for a very long time, we have the advantage of having access to the best equipment and skilled manpower that are required for this type of work. We have been in this field for over 75 years and this experience has provided us with a better understanding of the finer aspects of this business.

Since cooling towers are unpredictable due to their total dependency on atmospheric conditions, it has been difficult for clients and owners of cooling towers to completely understand the implication of cooling

## ACHIEVEMENTS

- Development and application of three stage nozzles at NPCIL RAPP cooling towers at KOTA.
- Completed IOCL Haldia project without a single accident in the overall project completion period.
- We were awarded the Best Safety Award for accident-free work at Indian Oil in the Gujarat refinery project.
- Achieved almost improbable growth rates of 540, 90 and 47 per cent in the last three years.
- Executed projects under tremendous technical constraints for approach and existing pipeline work at IOCL.

towers to their systems and plants.

Cooling towers can affect a plant's performance in both tangible as well as intangible ways. While the tangibles can be detected and taken care of, intangible implications are the ones that require a higher level of professional expertise.

Many players have entered the market with expert solutions on tangible aspects but this in the long run could land the owners in trouble. This is where GTPL stands out.

We understand and offer customised solutions to our clients. So we believe customer satisfaction is our USP. 

*An under-construction cooling tower at Haldia*

