

C&A

**Construction And
Architecture Magazine**

Newscast

Construction Equipments

Steel and TMT Bars

Railways

www.constructionnarchitecture.com

**A HUGE
POTENTIAL
FOR GROWTH
IN INDIA**

EPC SECTOR
A HUGE POTENTIAL FOR GROWTH IN INDIA





NUBERG EPC HAS DEVELOPED THE HABIT OF SETTING AND IMPROVING BENCHMARKS IN THE INDUSTRY

AK Tyagi,

CMD, Nuberg Engineering Limited



What growth do you foresee of Indian EPC companies in present times and which sector will prove to be the cornerstone of progress?

India is on the verge of enormous demand for EPC in the next few years. Union Minister of Chemicals & Fertilizers Shri D.V. Sadananda Gowda recently informed that an investment of Rs 8 lakh crore is anticipated in the Indian chemicals and petrochemicals industry by 2025. 'Make in India' across sectors, and India's increased defence self-sufficiency needs, will also create urgency for corresponding chemicals infrastructure. Manufacturing of polyethylene and PVC products too will require raw

materials. Hence, enormous potential exists in India to develop the chloro-chemicals industry with a focus on inorganic chemicals like trichloroethylene, poly aluminium chloride and other chlorine-based water treatment chemicals.

To promote energy-efficient and environment-friendly hydrogen fuel cell-based vehicles in the country, the Ministry of Road Transport and Highways last year notified the standards for safety evaluation of Hydrogen vehicles through an amendment to Central Motor Vehicles Rules. The Finance Minister Nirmala Sitharaman additionally announced the introduction of National Hydrogen Energy Mission in her 2021 budget speech.

We at Nuberg EPC serve Chemicals & Fertilizers, Hydrocarbon, Steel, Energy & Infrastructure, Nuclear, and Defence industries globally and in India; and now see a huge potential for growth in India. With an eye on future evolution, we are strengthening our offerings in Green products manufacturing as a new expertise area. Nuberg EPC is already building and commissioning India's first commercial scale Hydrogen Purification (fuel cell grade), Compression, Storage & Dispensing Facility.

How do you manage turnkey engineering projects ensuring delivery of complex production plants bringing together high order of engineering skills with intricate stages of supply chain and capital management?

With the execution of international projects is a herculean task because of their remote locations and logistics involved. Thus, there is a requirement for large logistics operations and coordination with global suppliers. We have honed our expertise and global experience after operating in more than 60+ turnkey projects across 32+ countries in past 25 years and dealing with laws, statutory requirements, and societal norms across geographical diversities. It is also necessary to have legal knowledge and legal reinforcement. Furthermore, knowledge of the country's operating laws and guidelines, such as the

electricity act, water act, labour laws, pollution laws, and their safety norms to execute the projects is necessary to avoid an unnecessary setback. We are prepared with all processes and capabilities to take on these challenges, and that is a great advantage that we have in terms of strategy with global size and skills. Our execution has to be done considering the geographical conditions. For instance, in the Middle East, you are not allowed to work during the afternoon in the summers because of the heat, and that is where these small things matter.

25 years of investment in the EPC & LSTK sector, Nuberg EPC has developed the habit of setting and improving benchmarks in the industry. We are amongst the world's fastest-growing EPC organizations with a specialized team of more than three hundred engineers providing global competitiveness.

We have maintained a 100% accident-free record to date while delivering projects around the world. It is a result of a clear focus on globally leading processes and adherence to strict quality control.

We also make sure to recruit and retain the best engineering talent. Our strength of more than 300 engineers with 300,000-person hour of skills is towards the higher side of engineering strength vs revenue ratio for the EPC industry.

Our world-class manufacturing facility in Gujarat has also resulted



in significant cost efficiencies for our clients globally.

We thus have quite a few global clients in diverse sectors. We have been working with some of the leading customers which even include Al Ghaith Industries (Abu Dhabi), Inovyn (Sweden), FLUODER (Paraguay), ADDAR (Saudi Arabia), Gulf Chlorine (Qatar), Union Chlorine (Abu Dhabi), DOSTEL (Turkey), Samuda Chemical Complex (Bangladesh), AGROCHEM (Egypt), SARL SASKO (Algeria), AMASSAS Co. (Ethiopia), Aditya Birla Chemicals (India), SCE Chemicals (Morocco), NCIC(Egypt), TCI Sanmar (Egypt), Oman Chlorine (Oman). During the pandemic, we have won 500TPD Sprea Misr sulphuric acid plant project in Ramadan, Egypt.

Over time, how are the EPC companies transitioning from manual and legacy systems to agile, data and AI-driven ones for environment-friendly, cost-effective, safer, and efficient processes of technologies/products?

Technologies and digitisation have been the foundation of a global effort in every sector and EPC LSTK is no different. What is noteworthy is that EPC being the factory of factories operates at scales that are magnitudes larger. Overall productivity enhancement in the EPC sector in the last 2

dramatic cost, timeline, mobility, protection, and modularity advantages in the plants as the machinery will be mounted on rails, pallet, or a frame at the point of manufacturing itself. Skid mounting also enables flexibility in the architectural planning of equipment location and the ability to adjust manufacturing facility size mid-project.

EPC players will be able to assemble the sub-plants including complex piping, delicate valves, and other valuable components, and ship them protected by the frame.

Testing is one of the most important phases in constructing a plant and the skid-mounted process allows for pre-testing of plant sub-systems before shipping them nearly as it is to the final location.

Tell us about the investment factor in digital technology for better collaboration and more data-driven decision-making that will help to streamline the procurement process?

We at Nuberg EPC are fast incorporating the latest in digital technologies and work processes. This includes IoT-enabled monitoring and maintenance of projects and commissioned plants. We are also incorporating Big Data for smarter design and inspections, AI-driven intelligent automation, AR and VR for superior safety, communication, and training, and 3D software (Catia & Solid Works) for accuracy in delivery and reduction in commissioning times.

Automation is enabling the development of the detailed initial design that is more than 95% fit as the final design thus enabling real-world estimation of engineering resources, material, and labour. Such automation also helps us to focus on construction execution and related supply chain at an earlier stage thus compressing timelines and costs.

decades had been minor compared to between 50 and 70% productivity growth for the overall economy as per McKinsey.

Now, however, digitisation, automation, AI, Big Data is serious measures creating all-around cost efficiencies. Earlier there may have been some inertia around the capital cost of such change, but the pandemic has forced rapid strides in the shift.

What do you have to say about Skid-mounted plant/technology?

Skid-mounted plants when used in place of the traditional stick-build methodology of on-site assembly will drastically compress the time required to build plants and reduce disruptions in operation in case of expansion or up gradation.

EPC industry will be able to provide clients with





Nuberg EPC is also moving towards skid-mounted plants which drastically compresses the time required to build plants, and reduces manpower requirement at the project site, especially for small size plants.

How is your experience with the clients in recent time who have always expected absolute adherence to quality standards and timelines irrespective of any back-end constraints?

Operationally for the global EPC-LSTK industry, there are now more stringent and dynamically changing local laws and health initiatives in project countries that

need rapid response and fore planning.

Our global experience of operating in more than 30 countries has prepared us with all processes and capabilities to take on these challenges, and that is a great advantage in terms of strategy with global size and skills. Our track record and word of mouth regarding project-level initiatives taken during the pandemic (e.g. chartering a flight for engineers) enabled us to win 500TPD Sprea Misr sulphuric acid plant project in Ramadan, Egypt.

Globally large EPC players manage projects

in different corners of the world with production hubs strategically located on several continents. Nationally how have EPC contractors expanded their roles and adopted the roles of project consultants?

Everyone needs to create their own winning strategy. Our success has been built on our R&D facility and India base manufacturing division.

The R&D facility in Sweden, EB Nuberg, contributes with innovative technology for specialty chemicals. The country offers the best global talent, and it makes me proud to share that we have patented technology for

hydrogen peroxide. We are thus amongst the very few Global Technological Licensors of Hydrogen Peroxide technology. We are also the Global Technological Licensor for sulphuric acid plants.

Our 115,000-sqm state-of-the-art manufacturing facility in Gujarat, which manufactures large industrial equipment and machinery that caters to the EPC projects as part of Nuberg EPC. These include Pressure Vessels, Reactors, Heat Exchangers, Columns & Towers, and Tanks.

We thus cater to numerous international as well as large Indian clients such as big PSUs and private companies.

What proactive role policymakers need to play to achieve their ambitious infrastructure plans and activities for big-budget turnkey projects? How will EPC contractors benefit from them?

The government's role in launching the PLI schemes for different sectors and initiatives like National Hydrogen Energy Mission needs to be appreciated here.

Some more important things for the Manufacturing industry and EPC players need to be worked on. One is the costs, in many EPC projects the high cost of licencing of patented manufacturing technology that needs to be acquired from MNCs. Policymakers should look at creating an indigenous pool of technological processes that can be leveraged for promoting Indian manufacturing and EPC capacity with tremendous savings of foreign exchanges for the manufacturer and the government.

Furthermore, there is a need for significant work on land and energy/power/gas costs. The manufacturing industry can be significantly more vibrant if it did not have to incur high land acquisition costs and high-energy costs.

Lastly, the cost of talent in India is currently high due to the limited pool size. There is a requirement for skilled engineers and other workers, and the government needs to work on enabling a better-trained and employment-ready talent pool. ■