

# EPC World

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**25 Years of  
Turning Ideas  
into Reality**



### 25 Years of Turning Ideas into Reality

Milestones, whether small or big, is an occasion for celebration and for Nuberg EPC which is celebrating 25 years of successful commissioning of EPC Projects on any ideas because of their global expertise and acumen, it is an inspiration to further expand their excellence.



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# 25 Years of Turning Ideas into Reality

Milestones, whether small or big, is an occasion for celebration and for Nuberg EPC which is celebrating 25 years of successful commissioning of EPC Projects on any ideas because of their global expertise and acumen, it is an inspiration to further expand their excellence.

Twenty five years of successfully and timely commissioning EPC project world over, Nuberg EPC has come a long way. Started in 1996 by AK Tyagi, today Nuberg EPC is a name to reckon with amongst global EPC players. Right from the inception of Nuberg EPC, AK Tyagi has a penchant for challenges. "Executing the impossible has been in our blood from inception – our tagline Making Ideas Happen is our DNA. Our first major project was an impossible project for a newly formed company. The project involved the relocation of a plant from the UK to Bangladesh - navigating the myriad technological, legal, logistical and resource challenges. Its success led to fifteen Greenfield projects in Bangladesh for us. It also set the ball rolling for the core set of learnings and domain expertise that went on to define Nuberg EPC and our roadmap to success," says AK Tyagi.

With sustained focus and determination, today, Nuberg EPC is the number one player in the EPC industry for Hydrogen Peroxide and Calcium Chloride. They are the number two EPC Company for Caustic Soda / Chlor-Alkali Plants globally. "We are amongst the world's fastest-growing EPC organizations with a specialized team of more than 300 engineers providing global competitiveness," says AK Tyagi. Till now, Nuberg has successfully delivered over 60 turnkey projects across 32+ countries. "Our technology know-how and global experience of operating in more than 30 countries help us deal with laws, statutory requirements, and societal norms across geographical diversities," says AK Tyagi.

### Nurturing manpower talents

In its quest for excellence the company gives utmost importance and respect to their employees. "The core engineering talent with the company is our biggest strength. We learnt the importance of engineering talent in our first

Bangladesh project and have maintained a laser focus on ensuring a high skillset and capacity. Nuberg EPC thus invests more in engineers than the industry norm that can be noted with the strength of more than 300 engineers with more than 300,000 available person-hours," says AK Tyagi. While the EPC sector is abound with high level of attrition, in Nuberg EPC it is hardly heard of. "There is an acknowledged talent shortage and thus a higher cost outlay in the industry. However, for Nuberg EPC, it is our investment in their wellbeing (economical, mental, safety, empathy, and growth) that has helped us retain and attract the best talent. We have thus been able to expand our leadership and offerings," says AK Tyagi.

### From inception to commissioning – Nuberg EPC

True to its tagline "Making Ideas Happen" and the dynamic leadership of AK Tyagi, over the years the company has brought itself to a level where they have developed capabilities to deliver customized projects. "Our company can do EPC around any ideas and products because of our global multi product capabilities and experiences," says AK Tyagi. He shared a few of its challenging projects, which they commissioned in spite of various adversities. "For instance, you are setting up a particular plant that requires a patented technology (as in how to go from raw materials to the final product) for the execution process of establishing a plant. We could make partnerships with global technology licensors, and our engineering depth and breadth help us deliver the EPC around it and commission the plant in a turnkey manner. For illustration, executing the Sulphur Bentonite project for National Fertilisers in Panipat was unexplored territory to us. Consequently, we did the tie-up with GTC USA for the technology and then leveraged our strengths to deliver the plant to National Fertilisers," says AK Tyagi.

## TURNKEY PROJECTS DELIVERED WORLDWIDE



**NUBERG EPC**  
Making Ideas Happen

**60+** Greenfield Projects  
**EXECUTED WORLDWIDE**



\* Basis number of plants delivered worldwide as turnkey projects.



**A**nil Tyagi is the founder and CMD of Nuberg EPC, global engineering, procurement, construction (EPC), fabrication and project management company, specializing in chemical process plants across sectors. With over three decades of vast experience spanning EPC projects worldwide, Anil is a name to reckon with, in the chemical industry. Anil's pioneering work and engineering prowess has catapulted Nuberg to innovate in-house technology for Chlor-Alkali, Sulfuric Acid and Hydrogen Peroxide Plants. Driving force behind is an aim to develop and offer large scale, excellent industrial solutions at affordable costs.

He has an extensive and diverse expertise in project engineering, project installation and commissioning, process design, trouble-shooting and project management. Anil, a dynamic personality infused with entrepreneurial spirit, has soared to great heights in process solving complex technical engineering problems, design, streamlining and optimization of manufacturing process value chain and process management.

A mechanical engineer by profession, Anil with his far-sighted vision and strategic business acumen founded Nuberg in 1996, after 10 years of experience in the private sector. He has contributed the necessary leadership and impetus to the group and with a clearly defined objective of bringing the best in the industry, he has transformed Nuberg into world-class organization operating in more than 32 countries. Backed by strength of 300+ qualified engineers, an 115000 sq m. State-of-the-art manufacturing facility in Gujarat and research facility in Sweden, Nuberg provides EPC serves across Chemicals & Fertilizers, Energy & Infrastructure, Steel and Nuclear & Defense industries.

### Leading from the front

AK Tyagi's acumen and foresightedness and his extensive and diverse expertise in project engineering, project installation and commissioning, process design, trouble-shooting and project management has helped him to identify emerging opportunities. "The industry dynamic however is shifting and has created opportunities for many new products that we are confident to deliver.

I wish to discuss one such product (Sulfolane), which we did for a Saudi Arabian client. This product was again a new specialty chemical that was not explored by us previously. The next product is Anisole, and we have seen many such products coming into the

market depending on their domestic dynamics. The Middle Eastern nations have realized that they can no longer bank on the oil economy, and they have to develop non-oil industries. There is a huge demand for new products, especially Specialty Chemicals, and also traditional/basic chemical products (Caustic Soda, Calcium Chloride, Sulfuric Acid, Hydrogen Peroxide, etc) that were earlier imported. However, now they desire to build their own capacities," says AK Tyagi.

The company has its own R&D facility in Sweden, EB Nuberg that intends to contribute with innovative technology for specialty chemicals. The company's state-of-art manufacturing facility in India produces Pressure Vessels, Reactors, Heat Exchangers, Columns

& Towers, and Tanks. "We own a 115,000 sq m manufacturing plant in Gujarat, which manufactures large industrial equipment and machinery that caters to EPC projects as part of Nuberg EPC. We cater to numerous international as well as large Indian clients such as big PSUs and private companies," says AK Tyagi. In addition to this, the company provides technology & engineering services, EPC & LSTK solutions, heavy fabrication works, technology know-how, engineering, procurement, construction and project management. Nuberg EPC actively cater to sectors - chemicals and fertilizer; nuclear and defence; energy & infrastructure and steel - right from ideation to final commissioning.

### Emerging Opportunities

"We believe that the opportunities in the EPC sector are huge and 2021 looks to be the landmark year for the sector," says AK Tyagi. As the GCC countries are looking to transform their economies from oil dependent industries to non-oil dependent industries. Nuberg EPC is diversifying into various industries including manufacturing of specialty chemicals. "This has resulted in spree of new projects across the entire region," says AK Tyagi.

There is also increased focus on exploring usage of Hydrogen as a clean fuel in existing and new projects, especially as it is also the feedstock for green chemicals. For Nuberg EPC, Hydrogen - Green, Grey and Blue; 2G & 3G Ethanol, Water Electrolysis, Water Soluble Fertilizers and Next Generation Nutrients are in focus currently.

EPC World



#### How is your tie-ups with technology licensors aiding you to overcome challenging EPC projects?

As an EPC company, we partner with various technology licensors as per our client's needs. They are important to us because their role in completing an entire turnkey project is really crucial. With an experience of over 25 years in the industry, we have worked all around the globe with almost all the technology licensors for products that we operate in. This makes it easy for us to get technological tie-ups and thus gives us an additional edge while pitching for a new customer. Association with various technology partners and licensors have helped Nuberg EPC hone itself into a globally excelling EPC and LSTK organization in the market today. We have been able to garner commendable references from clients that reassure new customers of our capability.

We have been able to position ourselves as the number one player in the EPC industry for Hydrogen Peroxide and Calcium Chloride. We are the number two EPC Company for Caustic Soda / Chlor-Alkali plants globally. We are amongst the world's fastest-growing EPC organizations with a specialized team of more than 300 engineers providing global competitiveness.

#### On the revenue front, for FY 2021-22 which sectors would contribute maximum to the growth of the company?

The year 2020 has been challenging for every industry globally. We were handling various projects that are still incomplete due to pandemic. During the pandemic, we even hired a chartered plane to ferry our engineers to Egypt for timely project completion. The pandemic has forced us to rethink the entire value chain to manage project execution and costs better.

## We deliver turnkey projects

The pandemic has forced us to rethink the entire value chain to manage project execution and costs better, says **AK TYAGI**, CMD, Nuberg EPC

Chemical consumption in developing countries will expand in traditional businesses while the western world will look at specialty chemicals to cater to newer consumer demands. Also, with the upcoming new realities, we have sharpened our focus in leveraging digital and automation to add value to our customers. The enhanced focus on digitization helps to reduce cost as well.

There is also a strong realization and focus across the GCC countries to transform their economies from oil-dependent industries to non-oil dependent industries. Countries are now building their capacities instead of importing and diversifying into various industries including the manufacturing of specialty chemicals.

*Sustained focus in the last 25 years has made Nuberg EPC a number one EPC & LSTK player for Hydrogen Peroxide and Calcium Chloride*

**Twenty five years of successfully delivering turnkey projects. Can you please share with us a few challenging projects that you commissioned?**

Sustained focus in the last 25 years has made Nuberg EPC a number one EPC & LSTK player for Hydrogen Peroxide and Calcium Chloride. We are also identified as the number 2 EPC Company for Caustic Soda / Chlor-Alkali plants globally. This is entirely based on the number of successfully delivered turnkey projects. Our technology know-how and global experience of operating in more than 32 countries help us deal with laws, statutory requirements, and societal norms across geographical diversities. Therefore, 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.

We have launched our own R&D facility in Sweden, EB Nuberg, that intends to contribute 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 licensers of Hydrogen Peroxide technology. We are also the global technological licensor for Sulphuric Acid plants.

## Sulfolane / Sulfuric Acid Plant Saudi Arabia



We also have our manufacturing division that produces Pressure Vessels, Reactors, Heat Exchangers, Columns & Towers, and Tanks. We own a 115,000 sq m manufacturing plant in Gujarat, which manufactures large industrial equipment and machinery that caters to EPC projects as part of Nuberg EPC. We cater to numerous international as well as large Indian clients such as big PSUs and private companies.

We hold world-class certifications such as ASME U2 certification, ISO 9001:2008, ISO 14001:2004, ISO 18001:2007, and ISO 9001:2015 certification, and NSIC 9001:2008 certification to ensure quality processes and International standards.

We have also launched Indian Peroxide Limited (IPL) that addresses the growing demand for high-quality Hydrogen Peroxide in the Indian market. Nuberg EPC with these initiatives has not only taken the Indian EPC industry to a global level but also raised the bars for them.

With our global outreach, we deliver to multiple 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), DOSTEL (Turkey), Samuda Chemical Complex (Bangladesh), AGROCHEM (Egypt), SARL SASKO (Algeria), AMASSAS Co. (Ethiopia), Aditya Birla Chemicals (India), Emirates Chemical Factory (ECF, Abu Dhabi), NCIC (Egypt), TCI Sanmar (Egypt), Oman Chlorine (Oman).

During the pandemic, we have won 500TPD Sprea Misr sulphuric acid plant project in Ramadan, Egypt.

**How are you integrating the latest technologies such as IoT, automation for faster completion of projects? Compare to your competitor what is the USP of Nuberg EPC?**

I have closely observed the EPC industry and its developments for more than three decades and have been a contributor to the capability and business growth that has taken place in the sector. We hope to become global leaders in more product areas and proudly represent Indian excellence.

Under our USP's, we can proudly mention that we are the single point solution company that has been working for more than two decades in order to provide our clients with cost-effective and top-notch quality plants. We are a team of specialized engineers who have been dedicated in serving and delivering clients all across the globe with Engineering, Procurement, Construction and Commissioning. Such services are provided for industries like Chemicals and Fertilizers, Energy & Infrastructure, Steel, Nuclear and Defence.

In addition, with over 60+ greenfield project executions and zero accident in our history so far, we hold a global experience to provide safe, reliable and timely delivery of industrial plants.

Nuberg EPC is 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 for accuracy in delivery.

Automation in the EPC industry requires unique

skill sets and technical capabilities and that provides a competitive edge when bidding for projects. Automation enables 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.

Nuberg EPC is also moving towards skid-mounted plants which will drastically compress the time required to build plants, especially for small size plants. Nuberg EPC will also be able to provide clients with significant cost, timeline, and modularity advantages.

*With our global outreach, we deliver to multiple clients in diverse sectors*

**EPC projects have to be delivered on time, else it leads to cost overrun and reputation of EPC players coming under the scanner. During the Pandemic how did you managed to delivered projects on time?**

We have noticed some growth in our business still we have seen the stress that comes with customers holding the investment decisions. Further, we have focussed on delivering projects in time despite lockdown situations. A good example is the Egypt project where 7-8 months were wasted due to lockdown and yet we managed to deliver the project despite extra costs because of our drive and commitment. Our organization has continued to pay salaries during that slowdown and even rented chartered flights for our engineers. The business decisions have been pushed on backfoot, and the new customer and prospects are also evaluating the market. We hope to get some transparency by the next quarter. Despite the crisis, the majority of our projects are in full stream execution. Taking learnings of the past year in the pandemic, we are trying to be more agile and work digitally. We have also migrated our entire process to ERP.

For marketing and business development, we utilize the internet in a big way and generate many leads. With our global presence, we are available 24\*7 to serve our customers with just a little digital push. Our sales team is efficient enough to follow-up on the pipeline with their own IT systems. We have all the necessary

stimulation and 3-D software like PDMS and SOLIDWORKS to facilitate our processes. Customers can study the plant simulation details that we share right from small parts to the largest equipment & machinery. We have different software for each team - AVEVA E3D for piping, HTRI, PV lite, ISOMAC, Prosteel, and STAAD.Pro.

We have 2 video-conference rooms, and they are busy nearly all the time. I have my own video-conferencing set-up in place, and it has been my travel replacement from an earlier average of 20 days in a month. I am even signing deals digitally with client CEOs, and our documents are as extensive as 200-500 pages.

*During the pandemic, we have won 500TPD Sprea Misr sulphuric acid plant project in Ramadan, Egypt*

**You being a leading global EPC player, what are the challenges you face right from designing to inception to commissioning to final execution of EPC projects?**

Acquiring an experienced workforce has been the greatest challenge we come across. Customizing the project to local laws and statutory requirements is a challenge and is a strength. Laws and policies in various countries keep changing, and we have to and are expertly able to abide by these changing requirements.

The real challenge is to gain customers' confidence as global players look for quality. Many global clients prefer western companies (European and American) in the belief that the quality may be better. However, Nuberg EPC as a company is today accepted as a world class EPC & LSTK organisation - we've established our credentials.

Now what happens is that everywhere we go we have some references to share with customers on that market and that gives us an edge. We've done projects across the world, and we have references to share right from Europe to central Asia to the Middle East and everywhere. So, this gives us quite an edge, and yes, of course, there are countries we are still trying to penetrate, and there we do get this query.

Our experience concerning payment terms has been very good with global customers. We've never faced any challenge over there as long as we meet the delivery standards - which we are very good at.

## Chlor Alkali Plant Abu Dhabi



Indian embassies from across the world have been very helpful. We are welcome everywhere we go, and full support is provided to us. We've had few experiences in the past where we needed help, and every time we were supported very well by the local Indian embassy. So, there is a lot of support from the government otherwise we won't have been able to flourish the way we are doing.

**Can you please take us through few of your outstanding international EPC projects that left a lasting impression on the clients and peers?**

Over the years, we have brought ourselves to a level where we have developed capabilities to deliver customized projects. Our company can do EPC around any ideas and products because of our global multi product capabilities and experiences. For instance, you are setting up a particular plant that requires a patented technology (as in how to go from raw materials to the final product) for the execution process of establishing a plant. We could make partnerships with global technology licenses, and our engineering depth and breadth help us deliver the EPC around it and commission the plant in a turnkey manner.

For illustration, executing the Sulphur Bentonite project for National Fertilisers in Panipat was unexplored territory to us. Consequently, we did the tie-up with GTC USA for the technology and then leveraged our strengths to deliver the plant to National Fertilisers.

This is our core strength and competency as an EPC company to deliver anything, and it is the essence that also reflects in our brand tagline-Making Ideas Happen.

The global market has faced a major slowdown amid pandemic both on the demand and supply. Hence, it is likely to show some growth but still be slightly depressed. The industry dynamic however is shifting and has created opportunities for many new products that we are confident to deliver.

I wish to discuss one such product (Sulfolane), which we did for a Saudi Arabian client. This product was again a new specialty chemical that was not explored by us previously. The next product is Anisole, and we have seen many such products coming into the market depending on their domestic dynamics. The Middle Eastern nations have realized that they can no longer bank on the oil economy, and they have to develop non-oil industries. There is a huge demand for new products, especially Specialty Chemicals, and also traditional/basic chemical products (Caustic Soda, Calcium Chloride, Sulphuric Acid, Hydrogen Peroxide, etc) that were earlier imported. However, now they desire to build their own capacities.

**What is your outlook for the EPC industry for the next four years?**

The Covid-19 pandemic negatively affected both the demand and supply side of industrial projects. We

believe that the opportunities in the EPC sector are huge and 2021 looks to be the landmark year for the sector. Some key chemicals that will be in demand and need EPC support are Sulphuric Acid market is projected to reach US\$ 11.10 billion by 2021. Growing agriculture sector and increasing metal processing activities, along with a rising consciousness about wastewater treatment drive the sulfuric acid market in India; Fertilizer consumption is highest in China and India, followed by the US and with the global population touching 8 billion the caloric requirement is expected to double; Sulfur production is expected to increase by approximately 27% between 2016 – 2021; The global lime market is expected to reach US\$50bn by the end of 2026, expanding at a CAGR

*Our company can do EPC around any ideas and products because of our global multi product capabilities and experiences*

of 2.5%, according to Persistence market research; Chlor-Alkali market will reach an estimated valuation of USD 55.39 billion by 2027 from USD 49.87 billion in 2019 at a growth rate of 2.9% for the forecast period of 2020 to 2027 according to B-Fortune Business.

There is also increased focus on exploring usage of Hydrogen as a clean fuel in existing and new projects, especially as it is also the feedstock for green chemicals.

For Nuberg EPC, Hydrogen – Green, Grey and Blue; 2G & 3G Ethanol, Water Electrolysis, Water Soluble Fertilizers and Next Generation Nutrients are in focus currently.

Being a responsible corporate citizen, Nuberg EPC is committed to bring in world class technologies and processes into India. Similarly, we are already actively pursuing global opportunities leveraging our Indian strengths and expanding our global footprints in upcoming and adjacent sectors.

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