

# Kotti Rama Raghava Kumar

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## PROFESSIONAL PROFILE

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### Head- Plant Operations | Head-Projects

(Fertilizer | Chemicals | Agrochemicals | Pesticides | Petrochemicals | Projects/Consultancies | Paper/Sugar/Steel Plants)

- ❑ **Senior Plant Operations & Projects Leader with a rich experience of overseeing large and complex Plant Operations.** Successfully commissioned several projects of large magnitude within a strict time schedule and stringent cost measures. Achieved production targets, increased plant capacity utilization and reduced down time. Spearheaded capacity enhancement, energy revamp and feedstock conversion (from Naphtha to Natural gas) in Ammonia and Urea Complex.
- ❑ **Led project activities end-to-end from conceptualization to execution** including technical specifications, stage inspections, progress monitoring, site management, Contracting, Proposal Management, Constructability Review, Budgeting & Cost Control manpower planning, Change Management, Quality Auditing and Safety Management.
- ❑ **Focused on continuous improvement in terms of production yield improvement, process, safety, fuel consumption, reducing emissions, implementing PSM practices, environmental safety while lowering operating costs significantly.**
- ❑ **Identified deviations and performed relevant modifications to stabilize processes for Petrochemical & Fertilizer Projects.** Implemented operational strategies for incident free plant operations
- ❑ **Delivered strong cost savings by completely eliminating previously occurring plant shutdowns caused by water scarcity, equipment leaks as well as electrical tripping at IGPL.** Headed the production department including 7 process plants (3 no's of PAN- Phthalic Anhydride plants, 3 no's of MA-Maleic Anhydride and one BA-Benzoic Acid plants) with all auxiliaries of Boilers, DM plants, ETP, Cooling Towers, Nitrogen Plants, I.A Plants.
- ❑ **Revamped fertilizer complex and increased capacity by 25% without a consultant at Nagarjuna Fertilizers.** Simultaneously, installed new 450 MTPD carbon dioxide recovery plant at a minimum cost of Rs. 198 Cr., two months ahead of schedule. Company received the prestigious CII Environmental Best Practices Award in the "Most Innovative Environmental Project" category for the year 2012.
- ❑ **Internal Auditor - Responsible Care Management System (RC14001:2008).**
- ❑ **Delivered Health, Safety & Environment (HSE) compliance,** FICC related matters, Fire and Safety systems and Zero Effluent/discharge facilities.
- ❑ **Thought Leadership-** Senior Member- American Institute of Chemical Engineers (AIChE). Published over 12 papers on Ammonia Plant Operation using Natural Gas, process, performance and quality improvement as well as Carbon Dioxide Recovery Plant Commissioning.

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## KEY SKILLS/CORE COMPETENCIES

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**Project Execution & Operations | Technical Services | Resource Allocation | Process Enhancements**  
**Quality Control & Assurance | Risk Management | Budgetary & Cost Control | Mentoring & Knowledge Sharing**  
**Team Building & Leadership | Process Engineering | Project Management**

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## PROFESSIONAL EXPERIENCE & SELECT ACCOMPLISHMENTS

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### HEAD- Plant Operations | IG Petrochemicals Ltd. Navi Mumbai,

**Feb 2018 - March 2020**

*IG Petrochemicals Ltd in technical collaboration with Lurgi GmbH, Germany is the largest producer of PAN (Phthalic Anhydride) with a capacity of 169250 MTPA. The public listed company commands 55% of market share in India with ~Rs. 1250 Cr in annual revenues*

Hired to implement operational strategies for incident free operations, undertake continuous improvements, reduce down time, bring improvement in procedures and process safety. Led Plant Operations with annual budget of Rs. 32 Cr.

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**Plant Operations Responsibilities-** Oversaw Continuous Improvement in Operations of Phthalic Anhydride plants(3 no's), Maleic Anhydride plants(3 no's), Benzoic Acid plant including all off sites facilities of Auxiliary Boilers (3 no's), Instrument Air plants, Nitrogen plants, Cooling towers, DM plants (3 streams), ETP, Zero Liquid Discharge (UF cleaning with RO plants)

## **DELIVERING STRONG COST SAVINGS BY DRASTICALLY ELIMINATING PLANT SHUTDOWNS**

- ❑ **Completely eliminated 25 days plant shutdown caused by severe water crisis saving Rs. 1.5 Cr.** Conducted necessary modification to run plant operations for 15 days with the rest 10 days met by other means.
- ❑ Swiftly addressed equipment leaks (Switch Condenser) preventing two plant shut downs and saving 20 Lakh.
- ❑ Drastically reduced **frequent high emissions from Stacks & Boilers**
- ❑ Conducted root cause analysis and successfully addressed the electrical problem of main raw material feed pump to reactor that had tripped several times causing shutdowns. Saved around 50 Lakh per annum (~600T PA production & 120 T of F.O)
- ❑ Improved Cooling Tower efficiency by ~15% (appx.) by changing the blade angle saving ~Rs. 0.6 Cr.

## **DEMONSTRATING STRONG PLANT OPERATIONS LEADERSHIP**

- ❑ **Delivered Rs. 1 Cr+ in cost savings by resolving high fuel consumption related issues caused by heavy rains.** Replaced damaged insulation with improved techniques which is expected to save ~ 100 T of fuel per year.
- ❑ Digitized entire technical documentation (77,000 documents including manuals) and made available for all technical personnel
- ❑ Fostered safe & healthy work environment by enforcing safety, health & environment (HSE) regulations, standards & procedures
- ❑ International Paper Presentation-Wrote a paper on Catalyst Replacement with Next Generation Catalyst for Production of Phthalic Anhydride which was accepted for presentation at the 2020 AIChE Annual Meeting at Houston, Texas.
- ❑ **Client brands worked with-**BASF - Germany, Thermax, Chembond Chemicals, Elof Hansson, Armstrong, Aker Solutions, CR Asia, Forbes Marshall, Yokogawa, Crown et al.

## **General Manager-Projects | Nagarjuna Fertilizers & Chemicals Ltd**

**Apr 2015 - Jan 2018**

Completed feasibility study for projects worth Rs.2000 Cr. working with international consultants. Developed the 5 year business plan focussed on improving plant performance and energy efficiency of plants.

## **DELIVERING LARGE PROJECTS AHEAD OF SCHEDULE**

- ❑ Installed and commissioned the Carbon Di Oxide Removal Plant (CDR). Completed revamp of Ammonia & Urea Plants within scheduled period of 24 months and CDR project 2.5 months ahead of scheduled time. Contributed in enhancing overall production capacity by around 2 lakh MT of Urea for the complex.
- ❑ Spearheaded "Energy Reduction Project" from 5.6 G.Cals to 5.41 G.Cals/MT of Urea at NFCL.
- ❑ Completed the internal and external audits successfully for Responsible Care (RC 14001), Quality (ISO 9001:2008), Environment (ISO14001), Safety (OHSAS) management systems.
- ❑ Part of the team that implemented the Process Safety Management System (PSMS).
- ❑ Delivered presentations to Andhra Pradesh Pollution Control Board for pollution clearance. Wrote a paper on "Need of hour – Survival of Urea Industry" the contents of which were presented to Fertilizer Ministry by Director & COO.
- ❑ Conducted several welfare programmes successfully as a CSR team leader at NFCL Site
- ❑ **Client brands worked with-**Haldor Topsoe Denmark, KBR- US, Saipem Chennai, PDIL - Noida, Snamprogetti Italy, Ammonia CASALE & Urea CASALE, Chembond Chemicals Ltd, Thermax , L&T

## **DETAILS OF KEY PROJECTS WORKED ON**

- ❑ Full cycle implementation of Urea Plant-1 with 5 lac MTPA Capacity
- ❑ Commissioning of Urea Plant-2 with 5 lac MTPA Capacity
- ❑ Full cycle implementation of 1.5 lac MTPA Carbon Dioxide Recovery Plant (From flue gases of Primary reformer stack)
- ❑ Increasing Production Capacities of 2 nos. Ammonia Plants & Urea Plants each by around 25%
- ❑ Full cycle implementation of New Ammonia Converter Installation, Catalyst Loading, Commissioning & Operation of (S-300) of 1350 MTPD capacity 6) Commissioning & GTR of NFL- Nangal Urea Plants

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## Deputy General Manager | Nagarjuna Fertilizers and Chemicals (NFCL), Andhra Pradesh 2009 - 2015

Project Head full cycle implementation of Fertilizer Projects. Worked as Head of the Department (HOD) for Technical Services during year 2009-2010

### KEY ACCOMPLISHMENTS

- ❑ Saved 28 MT/Hr LP Steam required by Carbon dioxide Recovery (CDR) Plant at the design stage itself by implementing necessary modifications. Delivered Rs. 6 Cr per annum in cost saving. **Company was awarded prestigious CII Environmental Best Practices Award in "Most Innovative Environmental Project" category for the year 2012.**
- ❑ Revamped larger fertilizer complex plant without a consultant along with the set up carbon dioxide recovery facility at a minimum cost of Rs.198 Cr. two months ahead of the scheduled 24 months.
- ❑ Successfully conducted detailed study for the Rs.2000 Cr. super revamp project to increase existing plant capacity by 40%. (16 Lakh MT to 22 Lakh MT of Urea per Annum) with technology supply from CASALE, Switzerland.
- ❑ Worked as site coordinator for Rs.5000 Cr. project new Ammonia & Urea Plant project of 3860 MTPD capacity( Licensors: M/s.KBR & Stamicarbon)
- ❑ Conducted feasibility study for 55 MW power project including quantifying potential costs and returns for improvements.
- ❑ International Experience –Visited Denmark to conduct technical discussions with M/s. Haldor Topsoe for implementation of HTER (Haldor Topsoe Exchanger Reformer) scheme to increase Ammonia Plant capacity from 1325 MTPD to 1400 MTPD.
- ❑ **Award & Recognition-Won an Appreciation Letter & Cash Award from the Director & COO for successful project implementation in 2009 with interview broadcasted on TV (ETV2)**

## AGM (PRODUCTION) - Ammonia Plant I & Urea Plant | NFCL, Andhra Pradesh 1989 - Sep 2009

Oversaw budget of Rs. 35 Cr as AGM with ~140 staff. Achieved production target, reduced ammonia losses, improved product quality, modified major H.P loop equipment and surpassed production and energy targets. Implemented Process Safety Management System (PSMS). Responsible Care (RC), QMS, EMS and OHSAS as a core team member. Started as Graduate Engineer Trainee.

### KEY ACCOMPLISHMENTS

- ❑ Improved installation of new ammonia converter (S-300) which included detail engineering, erection, catalyst loading, commissioning and GTR. Managed parallel operation of S300+ S200, resulting in savings of 30,000 G.Cals/annum ~Rs. 5.3 Cr.
- ❑ Recovered ammonia from M.P off gases in both Urea Plants saving 31000 G.Cals per annum i.e. around ~Rs. 6 Cr
- ❑ Core team member for Business Process Re-Engineering(BPR) and SAP deployment in Production and Technical services
- ❑ Represented NFCL (deputed by FICCI) as part of European fertilizers plants for study in energy efficiency
- ❑ Installed fluid coupling for primary reformer ID fan at Ammonia Plant-I, saving ~50 Lakhs per annum in costs

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## EDUCATION | CERTIFICATIONS | PAPER PRESENTATIONS/PUBLICATIONS

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**Internal Auditor - Responsible Care Management System (RC14001:2008)**

**QMS / EMS / OHSAS systems**

B.Tech | College of Engineering, Andhra University 1988

### PUBLICATIONS/PAPER PRESENTATIONS

Catalyst Replacement with Next Generation Catalyst for Production of Phthalic Anhydride accepted for presentation at the 2020 AIChE Annual Meeting at Houston, Texas.

“Need of hour – Survival of Urea Industry” - (Contents of which were presented to Fertilizer Ministry by Director & COO)

Published several papers on Ammonia and Urea Plant performance improvements (process, performance and quality) and revamping of fertilizer complex, Ammonia Plant Operation using Natural Gas as well as Carbon Dioxide Recovery Plant Commissioning