

Curriculum Vitae

Dr MP Sukumaran Nair FIE

1. Address. XIV/450, Morical Kakkanad P. O.
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2. Age & Date of Birth 60, January 24, 1950

3. Educational and Professional Qualifications

Degree	Specialization	Name of University
B Sc (Special) Degree	Chemistry*	University of Kerala, 1970
A M I E(India) (~B.Tech)	Chemical Engineering*	Institution of Engineers (India), 1981
Master of Business Administration (M B A)	Marketing*	Indira Gandhi National Open University, 1992
Master of Ecology & Environment (M E E)	Ecology and Environment*	Indian Institute of Ecology and Environment, 1994
Doctorate (Ph D)	Management	Cochin University of Science &Technology, 1998

* First Class plus

4. Familiarity with IT and Computer : Possess sound working knowledge and experience in Computer applications and modern IT capabilities.

5. Languages on command : English, Malayalam, Hindi

6. Current assignment Special Secretary to Chief Minister
Government of Kerala

7. Field of Specialization

1. Corporate management of major chemical processing units in the fertilizer and chlor-alkali sector.
2. Project economics, development of DPRs and techno-economic feasibility studies
3. Energy/ water/environment management
4. Pilot plant scale up
5. Facilities planning for major industrial units
6. Engineering design, standardization and consultancy management
7. Turnaround strategy for industrial units
8. Process plant environment, health and safety management studies
9. Technical services to chemical processing units

8. Major assignments

36 years of experience in the chemical manufacturing industry and administration. Mostly in process plant management, engineering design and consultancy in the fertilizer, petrochemical and chlor alkali sector.

(Employment Record attached)

- i. Managing Director, Travancore Cochin Chemicals (TCC) Ltd, Cochin
- ii. Director, Travancore Cochin Chemicals Ltd, Cochin
- iii. Chief Superintendent of Production, Fertilizers And Chemicals Travancore (FACT) Ltd , Cochin, India.
- iv. Head of Corporate Planning, FACT Ltd.
- v. Chairman, Chemical Engineering Division Board, Institution of Engineers (India) *(in office)*
- vi. Director, Kerala Financial Corporation (KFC) *(in office)*
- vii. Director, Kerala Institute for Labour and Employment (KILE) *(in office)*

9. Publications

80 Management and technical papers to various National/International Journals, Seminars/Workshops. *(select list attached)*

10. Professional Body Memberships

- A. Fellow, Institution of Engineers (India)
- B. Member
 1. American Institute of Chemical Engineers (AIChE)
 2. European Federation of Chemical Engineers (ECFE)
 3. Indian Association for Environmental Management
 4. National Safety Council (NSC)
 5. Kerala Management Association (KMA).
 6. Executive Committee of Alkali Manufacturers Association of India

12. Other assignments

Member

- i. Expert Panel for District Planning, Ernakulam District.
- ii. Standing Advisory Committee on Pollution to the Minister for Industries, Government of Kerala.
- iii. Board of Studies in Environmental Studies, Cochin University of Science and Technology, Cochin, India.
- iv. Perspective Planning Division, Greater Cochin Development Authority.
- v. National Council and Chemical Engineering Division Board & International Affairs Committee of the Institution of Engineers (India).
- vi. Draft Committee on Engineers' Bill, Engineering Council of India, New Delhi.
- vii. Expert Committee for Development of Rutile Technology from East Coast Ilmenite Sands, Ministry of Steel, Govt of India.
- viii. Task Force of the Institution of Engineers (India) on the Revision of National Building Code of India.
- ix. Reviewer of ASM International reports
- x. Reviewer of UNDP Millennium Ecosystem Assessment reports

13. Awards/Recognition

- i. Listed in the *MARQUIS Who's Who* in the World.
- ii. International Man of the Year 1996-97 Award from International Biographical Centre, Cambridge, England.
- iii. Outstanding Chemical Engineer Award 2009 from Indian Institute of Chemical Engineers (IChE), India

Employment Record

2008- **Special Secretary to Chief Minister, Government of Kerala**
(Advisor for State level projects in the industries, infrastructure development and programme implementation)

1999-2001 &
2006-2008 **Managing Director, The Travancore-Cochin Chemicals Ltd, Cochin** (A Government of Kerala Undertaking)
Complete responsibility of management of a major State Public Sector Company in the Chlor-Alkali sector. Besides production and marketing The job involved liaison with Board of Directors, Govt/ Regulatory authorities, Financial Institutions, Public and other stakeholders.

Brought out a complete turnaround of the Company which was running on heavy losses by devising short term and long term strategies to bring in profitability in operation. During the turnaround phase the sales of the company increased by 40% than the previous year.

Active involvement for getting imposition of anti-dumping duty under WTO provisions on caustic soda during 2000.
A new product (sodium hypochlorite) was added to the product range of TCCL by putting up a grass route plant in less than 8 months.

Initial phase of activities started for a captive hydroelectric project (22 MW) and a Synthetic Rutile project using technology developed by the company along with the DSIR of the Govt of India.

Report to the Principal Secretary, Dept of Industries, Govt of Kerala.

1996 – 1999 **Director , Travancore Cochin Chemicals Ltd**
2004-2006 **Chief Superintendent of Production:** A major Nitrogenous and Phosphatic Fertilizer Complex of The Fertilizers And Chemicals Travancore (FACT) Ltd at Cochin.

Overall responsibility at the corporate level for ensuring targeted production levels, smooth operation keeping safety, environment and productivity concerns of a fertiliser complex consisting of ammonia, urea, sulphuric acid, phosphoric acid, phosphatic complex plant , associated offsite and utilities.

The responsibility included product handling, storage, bagging

and despatch, raw material sourcing and production planning, maintenance planning and annual turnaround, maintaining conformity to ISO 9000 Quality and ISO 14000 Environment standards, housekeeping and upkeep of process plants, employee welfare and training, environment management, energy conservation and operational plant safety and safe disposal of hazardous waste.

2001-2004 Chief (Corporate Planning)

The Fertilisers And Chemicals Travancore Ltd, Cochin.

(A multi divisional Public Sector Corporation in the Fertilizer and Chemical Processing industry since 1944 having 6000 employees and a turnover of over Rs 1800 Cr with Engineering Consultancy, Fabrication, Marketing Divisions).

The job involved strategic planning, and development of strategic and corporate plans, setting future directions of growth, assessing implications of Govt policies on current operation, Corporate MIS and MOU related activities. Involvement at the committee level for the procurement of major raw materials, intermediates etc.

Report to Chairman and Managing Director and Technical Director.

1997 – 1999 :Deputy Chief Engineer (Process)- FEDO , FACT Ltd

FACT Engineering & Design Organisation (Engineering & Consultancy Division of FACT Ltd.)

Group Leader for Process Engineering activities such as process design, detailed engineering, project co-ordination, commissioning, audits etc of process plants in the fertilizer, petrochemical, refinery and pesticide sector.

Implementation of ISO 9000 Quality Management Systems and responsible for most of the activities listed above.

Pilot plant scale up and successful commercialization of of Dicofol and Mancozeb plants of HIL Udyogamandal.

1992-1997 :Design Manager (Process) – FEDO, FACT Ltd

FACT Engineering & Design Organization (Engineering & Consultancy Division of FACT Ltd.)

Developing of Basic Engineering package by scaling up of Pilot Plant and commercialisation of technology.

Detailed Engineering and Design of Chemical Petrochemical & Pesticide Plants and allied Pollution Control Facilities.

Preparation of techno-economic Feasibility Reports, troubleshooting and reliability studies of process plant equipment.

Energy, Safety and Environmental Audit of Chemical Plants
Coordinated and actively involved in Safety Audits / HAZOPS /
Environmental Management Programmes for Fertiliser /
Petrochemical Complexes.

Development of Software for Process Engineering design.
Associated with retrofits / revamp and modernization of Process
plants, Studies for rehabilitation schemes etc.

**1972 – 1992 : Assistant Manager, Process Engineer and Technician
(Process)**

Operation and maintenance of fertilizer plants and associated
utilities, Commissioning of Pollution Control facilities,
Decommissioning and Inspection of Ammonia Storage tank etc.

Monitoring, Performance Evaluation and troubleshooting of
operating plants such as Ammonia, Urea, Complex Fertilizers,
Offsite facilities like Captive Power plant, Boiler, Cooling Tower,
Water Treatment, Effluent Treatment etc.

Statistical Analysis, Performance Analysis and Management
Information Services.

Preparation and Evaluation of Technical Feasibility Reports,
Failure Analysis, and Test Run of plants, etc. Conduct of Safety
Audits, Energy Audits, and HAZOP studies. Devising Energy
and Water Conservation Schemes for Process Industries

Select List of Technical & Management Publications

1. **Global fertilizer outlook and challenges to manufacturers in India: Vision 2020: Second India Chemical Industry Outlook**, organized by *Chemical Week*, the Indian Chemical Council (ICC), and Chemical Petrochemical Manufacturers Association (CPMA), Mumbai, India, April, 2009.
2. **Re-evaluate your process safety systems for hazardous material storage**, *Hydrocarbon Processing*, Gulf Publishing Company, Houston, USA, April, 2009.
3. **Strengthen S & T Institutions for Industrial Development**, Kerala Science Congress, Kerala State Council for Science, technology and Environment, Kollam, January 2009.
4. **Fuel for Change**, Review of *Biofuels for transport: Global potential and implications for sustainable energy and agriculture*, World Watch Institute, *FRONTLINE*, October, 2008.
5. **Updates on process safety systems**, *Hydrocarbon Processing*, Gulf Publishing Company, Houston, USA, November, 2007.
6. **Ammonia industry-today and tomorrow**, *Hydrocarbon Processing*, Gulf Publishing Company, Houston, USA, April, 2006.
7. **Management of Hazardous Waste from Fertilizer Complex**, 18th AFA International Annual Technical Fertilizer Conference & Exhibition, Morocco July, 2005.
8. **Restructuring of Public Enterprises: Where are we & Where are we going to?** *Pass line*, Cochin, India, July 2005.
9. **Improve CO₂ removal from ammonia Plants**, *Hydrocarbon Processing*, Gulf Publishing Company, Houston, USA, August, 2005.
10. **Management of chemical disasters: The Bhopal Gas Tragedy- a review in its 20th year**, *Hydrocarbon Asia*, AP Energy Business Publications Pte Ltd, Singapore, March/April, 2005
11. **Towards a greener Fertilizer Industry**, *Nitrogen & Methanol* No 274, British Sulphur Publishing, London, UK, March- April, 2005.
12. **Hazardous Material storage Installations-steps to address concerns on Safety and build public confidence**, International Conference on Bhopal Tragedy and its Effects on Process Safety, Kanpur, India, 2004
13. **Shifting Paradigms of Environmental Management in the Manufacturing Industries**, World Engineers Convention, World Federation of Engineering Organisations & UNESCO, Shanghai, China, 2004
14. **Critical Issues in Material Selection for Phosphoric Acid Plants**, *Fertilizer International*, No 402, British Sulphur Publishing, London, UK, Sept-Oct 2004.
15. **Integrating Safety and Environmental Concerns in the Development of Chemical Processing Industries**, Loss Prevention 2004, 11th International Symposium of the European Federation of Chemical engineers, Praha, Czech Republic, 2004
16. **Refinery integrated Fertilizer, Power and Petrochemicals Combine- A synergistic option for planning facilities**, *Hydrocarbon Asia*, Bottom Line Improvement Conference, Singapore 2004
17. **India : Adapting to new Global Parameters**, *Fertilizer International*, No 396, British Sulphur Publishing, London, UK, Oct 2003.

18. **Carbon Dioxide Removal Systems for Ammonia Plants- a survey, Nitrogen & Methanol** No 264, British Sulphur Publishing, London, UK, Aug 2003.
19. **Future Roadmap of the Country towards the Absorption of Fruits of Scientific Development in the long term : Role of Engineers—an India Perspective**, fourth International Seminar on 'Economic Advancement Based on the Knowledge Society' Institution of Engineers, Colombo, Sri Lanka, 2003.
20. **Impact of WTO Agreement on Indian Chemical Industry: 17th National convention of Chemical Engineers**, Institution of Engineers (India), Cochin, 2001.
21. **Indian Fertilizer Industry and the Global Economic Environment**, IFDC Workshop on 'Globalization, privatization and Agricultural markets –Challenges and Opportunities, International Fertilizer Development Center, Muscle Shoals, USA, 2002.
22. **Environmental Biotechnology for Sustainable Chemical Processing**, Country Reports, Committee on Engineering and Environment, World Federation of Engineering Organizations, Paris, 2002
23. **Material Selection for Phosphoric Acid Plants**, 17th International Annual Technical Conference of the Arab Fertilizer Association, Amman, Jordan 2004.
24. **Stress Corrosion Cracking- A Caustic Experience**, *Chemical Engineering*, McGraw Hill Publishers, New York, USA, Jan, 2003.
25. **Chlor-Alkali Industry: Slow Revival after the Slump-The Hindu Survey of Indian Industry**, Chennai 2001.
26. **Strategies for Sustainable Chemical Processing: International Seminar on 'The Engineer in Sustainable Social and Economic Development-Regional Contribution towards Agenda 21**, the Institution of Engineers, Sri Lanka, 2002.
27. **Tackling Corrosion in Ammonia Plants-Selecting the proper Materials**, *Chemical Processing* published by Putman Media, USA, Dec 2001.
28. **Environment Management Issues in Indian Fertilizer Plants**, International Fertilizer Industry Association Technical Conference, Chennai, India.
29. **Hazard Identification and Management-an Overview**, *Hydrocarbon Processing*, Gulf Publishing Company, Houston, USA, July 2002.
30. **Control Corrosion Factors in Ammonia and Urea Plants – Hydrocarbon Processing – January 2001.**(Invited Paper 'Global Corrosion Meet' organized by National Association of Corrosion Engineers (NACE) International India Section Mumbai, Nov 2000)
31. **HAZOPS and Effective Process Hazard Analysis that Works**, International Conference on Effective Chemical Safety and Spills Handling, Responsible Care, Distribution and Storage: what Works (Invited Paper)- October 2000, Singapore,
32. **Use Monitoring Programs to Improve Ammonia Plant Uptime – Hydrocarbon Processing**, February 2000, published by Gulf Publishing, Houston, Texas, USA.
33. **Hazard Area Classification in Process Plants - National Workshop on Process Plant Safety**, National safety Council, Cochin – January 1999.
34. **Refinery Option for Power Generation**, IE(I) Souvenir on Infrastructural developments, Institution of Engineers (India), Cochin, 1999
35. **Technology Adaptation**, National Seminar on Manufacturing Technologies for the 21st Century and Re-organising Engineering Education, Govt Engineering College, Thrissur, March 1999.

36. **Strategies for Pollution Control in Process Industries**, UGC sponsored Seminar on Environmental Studies, St.Xavier's College for Women, Alwaye, Cochin, 1999.
37. **ISO 14000, Environmental Management Systems**, Presentation at the UGC workshop for College Teachers, Mahatma Gandhi University, Kottayam Dec 1998
38. **Hazard Management in Chemical Process Industries**, FACT Techsocon National Conference on Health, Safety & Environment, FACT Technical Society, Cochin, 1998
39. **Process Plant Risk Analysis**, *Chemical Engineering World*, Jasubhai Publishers, Mumbai, August 1998
40. **Corrosion in Ammonia and Urea Plants**, Eighth Corrosion Congress of the National Corrosion Council of India, COCHIN, 1998.
41. **Corrosion in Chemical Plants**, Workshop on Corrosion and its Abatement in Plants, organised by the National Productivity Council, Cochin, 1998.
42. **Safety in Handling Ammonia**, Seminar organised by the Directorate of Factories and Boilers, Govt. of Kerala, Kottayam, 1998.
43. **Instrumentation and Control Systems for Process Optimization and Energy Efficiency** at National Workshop organised by the Energy Management Centre, Govt. of Kerala, 1998.
44. **Methodology for Energy Audit**, Workshop for Energy Managers organised by the UNESCAP and Energy Management Centre, Kerala 1998
45. **Monitoring Ammonia Plant Operations**, "Asia Nitrogen" International Conference, British Sulphur Publishing, Kuala Lumpur, 1998.
46. **Fertiliser Raw Materials – Indian Scenario**, Indian Fertiliser Scene Annual, 1997
47. **Environment and Development-Striking a balance**, 7th Swadeshi Science Congress organised by The Swadeshi Science Movement , at CPCRI Kasaragode, 1997.
48. **Environmental Dimensions in Technical Education**, Workshop on "Environmental Education in Management Training" organised by The Institute of Human Resource Development, Thiruvananthapuram and London Environment Center, London., 1994.
49. **Vulnerability Analysis, Risk Analysis and Developing Scenarios**, National Workshop on "Chemical Emergency Preparedness and Response" organised by National Safety Council, Mumbai at Cochin, 1993.
50. **Emergency Preparedness in the fertilizer Industry**, National Workshop on "Disaster Management" organised by the Fertilizer Association of India, New Delhi at Surat, India
51. **Heat Recovery Systems in Ammonia Plants** - *Chemical Industry Digest*, Blackdale publishing, Mumbai, June 1995
52. **Safety Audit for Process Plants**, National Workshop organized by National Safety Council, Mumbai at Cochin. 1994.
53. **Zero Effluent approach for Fertilizer plants**, National convention on "Industrial Water Treatment and Conservation", organized by The National Center for Technical Development, Bombay 1993
54. **Water Management at FACT-Cochin Division**, All India Seminar on "Waste Management in process industries "organized, by Indian Institute of Chemical Engineers (IChE), Cochin 1992.