

CURRICULUM VITAE

PROF DR.-ING. JAMEEL AHMAD KHAN

DATE OF BIRTH Feb 01, 1938

EDUCATION

- 1 Bachelor of Engineering (Mech & Elect) from the University of Karachi with First Class. (January, 1957)
2. Doctorate in Mechanical Engineering from the Institute of Aerodynamics, Technical University of Aachen, West Germany, with distinction **“SEHR GUT”** (Major Field: Fluid Mechanics) (June, 1960)
- 3 Special courses in Industrial Organisation and Management, Nuclear Power, ICE Design, Vibrations, Electronics and Optical Measuring Techniques in the Technical University, Aachen, West Germany. (1958-1960)

PROFESSIONAL AFFILIATIONS

- 1 Member, Association of German Engineers (VDI)
- 2 Member, International Solar Energy Society
- 3 Member, International Association for Hydrogen Energy
- 4 Member, Society for International Development
- 5 Member, International Organisation Committee, International Association for Continuing Engineering Education.
- 6 Chairman, Japan Pakistan Environmental Research Group (JAPAN-ERG) (1996-2000)
- 7 Chairman, Pakistan Desalination Association (Pak DA) (1997-2000)
- 8 Chairman, Pakistan Engineering Council
First Term: (1997-99)
Second Term: (2000-2002)
- 9 President, Pakistan Chamber of Engineers
First Term: (1997-98)
Second Term: (1999-2000)
Third Term: (2001 – 2003)
- 10 Member, Asian Fluid Mechanics Committee (2000 – todate)

PROFESSIONAL EXPERIENCE

1. After graduation joined Karachi Shipyard and Engineering Works Limited (PIDC), acquired training in all the production engineering trades, and was responsible for erection work of the out-fitting on the Dry Dock (1957).
2. Trained in Maschinen Fabrik Augsburg Nurnburg, West Germany, in the field of manufacture and testing of Heavy Marine Diesel Engines, Gas Turbines and Compressors (Concurrently with studies 1958).
3. Worked as Research Scholar in the Institute of Aerodynamics, Technical University of Aachen, West Germany. (1958-1960)
4. Senior Engineer, Associated Engineers Limited (1960-1966)

Some important assignments:

Scheme for Reorganisation and Expansion of Pakistan Flotilla Company Limited, East Pakistan, Planning of Repair Facilities at Barisal for the East Pakistan Inland Water Transport Authority, Common Service and Facilities Centres for the Small Industries Corporation, at Karachi, General Consultant for appraisal of Industrial Schemes on behalf of the Industrial Development Bank of Pakistan. Operational analysis and planning for Reorganisation. Modernisation and Expansion of the Fauji Foundation Industries and Research Studies on Industrial Projects for the Planning Commission of Pakistan for the Second Five Year Plan. Feasibility studies for the Investment Promotion Bureau of Pakistan. Evaluation of Industrial Projects for the Planning Commission of Ghana. Feasibility studies and appraisal reports on a number of industrial projects for private client. Planning of Industrial Estates at Jeddah, Riyadh and Dammam for the Ministry of Commerce and Industry, Saudi Arabia. Complete design of the Automatically Controlled Heating System for New Engine Overhaul Workshop for Pakistan International Airlines Corporation at Karachi.

5. Director, Consultants Alliance Limited (1966-68). Responsibilities included management of the Industrial Wing engaged in Industrial Planning, Preparation of Feasibility Studies and Mechanical Engineering Design.
6. Professor and Head of the Mechanical Engineering Department, NED Government Engineering College (1968-76). Also worked as Director Research Team, High Level Engineering Manpower Study sponsored by the National Manpower Council, Government of Pakistan.
7. Chairman, Department of Mechanical Engineering since the creation of NED University of Engineering & Technology, Karachi in March 1977, responsible for the physical planning of undergraduate and post graduate laboratories and

other teaching facilities for the department catering for a student population of about 1500. Developed a fairly close linkage of the department with the local industry and other research organisations. Initiated and established several new programmes, particularly in the field of Renewable Energy Sources, Energy Conservation, Water Desalination, Robotics and Pollution Control. The Department is actively engaged in the Research and Development activities pertaining to Solar Energy Systems, Sea Wave Activated Power Systems, Wind Energy Systems and Water Desalination.

Worked for the University Management as

Member, Syndicate, NED University of Engineering & Technology
(1977 - 1984)

Member, Senate, NED University of Engineering & Technology
(1977 to date)

Member, National Academic Council, University Grants Commission
(1977 - 1987)

8. **Vice Chancellor, NED University of Engineering & Technology**
(1987-91)

As Chief Executive of the University, was responsible for the Academic, Administrative and Financial Management of the entire system. The University caters for a student population of around 6000 and offers undergraduate programmes in 16 and post-graduate programmes in 7 disciplines of engineering and technology, which are internationally recognised. Three premier institutions of the Armed Forces are affiliated with University viz Military College of Engineering, Pakistan Naval College of Engineering, PNS Jauhar and Pakistan Air Force College of Aeronautical Engineering. In addition two public sector institutions viz: Dawood College of Engineering & Technology and Government College of Technology are also affiliated with the University.

Established University - Industry Council in collaboration with the Chamber of Commerce & Industry, Karachi.

Developed extensive computerisation facilities in the University and a sizeable Research Fund of its own.

Initiated programmes aimed at linkages with a number of foreign Universities.

Worked as Chairman of several Vice- Chancellors' Committees on all Pakistan basis such as one constituted for preparing a Model Act for all the State Universities in Pakistan.

9. Worked as Professor of Mechanical Engineering in BPS - 22 (Maximum Grade in the Civil Services of Pakistan) and as the senior most Professor in the University, looking after research degree programmes in the fields of Water Desalination, Flow Induced Vibrations, Computational Fluid Dynamics, Heat Pipes, Metal Hydrides, Heat Pumps Energy Conservation, Solar Energy and Modal Analysis
(Nov 1991 – Dec 1996).

10. **Pro-Vice Chancellor, NEDUET** (Dec 1996 – 1998)

11. **Professor Emeritus** (Sept. 1999 to todote)

Actively pursuing and supervising research at the Post-graduate level leading to the award of M.Engg. Degrees by research. The current research topics are:

- To Test The Hypothesis: (A) The Ultrasonic Vibrations generated in the Feed Water will effect the Flow Through Reverse Osmosis Membranes, (B) The Ultrasonic Vibrations may help in removing The Fouling Of Membranes, there by increasing their Effective Life. (M. Engg. already awarded)
- To Investigate Into The Optimum Configuration Of Metal Hydride Compacts From The Point Of View Of Heat & Mass Transfer Employed In Advanced Refrigeration Systems
- Investigations Into The Revamping Of Hydraulic Turbine In The Fluid Mechanics laboratory Utilizing The Numerical Test Rig Concept
- Testing & Evaluation of Proton Exchange Membrane Fuel Cell
- Testing & Evaluation Of The Steam Generation System Based On Evacuated Tube Solar Collectors With Heat Pipes

12. **Chairman Pakistan Engineering Council** (1997 – 2002)

PEC is statutory body constituted in 1976 under an Act of the Parliament for the regulation of engineering profession in Pakistan, principally the three services regimes viz. engineering education, consulting engineering and construction industry. The registered membership of PEC comprises 68,000 professional engineers, 220 consulting engineers and over 6000 construction companies.

CORPORATE MANAGEMENT

- 1 Director, Metropolitan Steel Corporation, Karachi (1986-1992).
- 2 Member, Board of Trustees, Pakistan Science Foundation (1988 - 1991).
- 3 Director, National Engineering Services of Pakistan (Pvt.) Ltd. (1998-todate)

ADVISORY POSITIONS

- 1 Honorary Advisor to the Standing Committee of Industry, Federation of Pakistan, Chamber of Commerce and Industry. (1988- to date)
- 2 Member, Export Promotion Committee, on Engineering Goods, Export Promotion Bureau, Government of Pakistan. (1968 - 1974)
- 3 Advisor to the Department of Insurance, Government of Pakistan (1968-1976)
- 4 Advisor to the Education Section, Planning Commission, Government of Pakistan (1972-1973)
- 5 Member, Committee for the Establishment of Pakistan Bureau of Engineering Design, Ministry of Science and Technology, Government of Pakistan. (1973-1974)
- 6 Member, Committee for the Establishment of National Engineering Laboratory, Ministry of Science and Technology, Government of Pakistan. (1973-1974)
- 7 Advisor, National Development Volunteer Programme Planning Division, Government of Pakistan. (1973-1976)
- 8 Member, Panel for Transfer of Technology, Ministry of Science and Technology, Government of Pakistan. (1974)
- 9 Member, Advisory Committee, Hydro-Carbon Institute, Ministry of Fuel, Power and Natural Resources, Government of Pakistan. (1977)
- 10 Member, Panel of Experts, National Institute of Oceanography. (1982 to 1984)
- 11 Member, National Committee on Clean Energy, Ministry of Science and Technology, Government of Pakistan. (1983)
- 12 Member, Panel of Experts, Kalabagh Dam Consultants (1983- 1986)

- 13 Member, Advisory Committee on Power and Engineering, Pakistan Atomic Energy Commission. (1987 - to date)
- 14 Advisor, Centre for Environmental Health Activities (CEHA), Eastern Mediterranean Regional Organisation, WHO, Amman, Jordan. (1987 - 1995)
- 15 Member, Screening Committee, Asian Productivity Organisation, Tokyo, Japan (1987 - 1994)
- 16 Member, General Council of the Society for the Promotion of Engineering and Technology in Pakistan (SOPREST), Parent Body of the Ghulam Ishaq Khan Institute of Engineering Sciences & Technology. (1992- 2002)
- 17 Member, Board of Governors, National University of Science & Technology, Rawalpindi. (1997 – 2002)
- 18 Member, Board of Governors, Pakistan Institute of Engineering & Applied Sciences, Pakistan Atomic Energy Commission, Nilore, Islamabad (2000 – 2002)
- 19 Member, National Commission for Science & Technology, Govt. of Pakistan, Islamabad. (1997 – 2002)
- 20 Member, Advisory Board, Ministry of Housing & Works, Govt. of Pakistan. (1997 – 2002)

CURRENT RESEARCH

- 1 Flow through RO Membranes (Molecular Sieves) particularly for Water Desalination. Focus on combating fouling of membranes applying US vibrations. Reduction of Concentration polarisation within the Boundary Layer and inhibition of scaling and generally the effect of US vibrations on the operating parameters being investigated.
- 2 Flow through Hydrophobic Membranes (Thermopervaporation / Transmembrane Distillation).

Investigation to the Water vapour permeation characteristics through the hydrophobic membranes under temperature gradient. Focus on the utilization of low grade heat energy to carry out the process of Water Desalination.
- 3 Flow through porous Metallic Matrix Hydrides for heat and mass transfer. Investigations into the adsorption / desorption thermodynamic characteristics of metal hydrides with the objective of developing safe hydrogen storage. Focus on the development of Metal Hydride Compacts as advanced technology for efficient refrigeration and cooling leading to environmental friendly systems.

PUBLICATIONS

1. Dr. –Ing. Khan, Jameel Ahmad, Aerodynamics Institute T.H. Aachen, W. Germany, *Untersuchungen Zur Instationären Stromung Durch Unstetige Querschnittsänderungen in Druckleitungen von Einspritzsystemen* VDI Zeitschrift, W. Germany (1961)
2. Dr. –Ing. Jameel Ahmad Khan, Research Study on *High level Engineering Manpower in Pakistan*, National Manpower Council, Govt. of Pakistan (US AIDED, 1970)
3. Dr. –Ing. Jameel Ahmad Khan, Research Study on *Capacity Utilization in Large Engineering Industries in Pakistan*, Research Section, Planning Commission, Govt. Of Pakistan (1975)
4. Arata ICHIKAWA, Saburo MATSUI, Tetsuya KUSUDA, Tooru MORIOKA, Kauser Bashir Ahmed and Jameel Ahmad Khan, *Concept on the Sanitation in the Old Civilization Moenjodaro and its Contemporary Meaning*, Committee on Environmental Systems, Japan Society Civil Engineers, Environmental Systems Research, Vol.22, 1994, Tokyo, Japan
5. Arata ICHIKAWA*, Tetsuya KUSUDA**, Saburo MATSUI***, Tooru MORIOKA+, Ryuujiro KONDOU++, Jameel KHAN, Kauser AHMAD, *A Study on Water Environment in Moenjodaro*, International Joint Research Project, Japan Society for the Promotion of Sciences, Feb. 1996. Kyoto, Japan
6. Prof. Dr. –Ing. Jameel Ahmad Khan, *Prospects of Water Desalination in Karachi & Coastal Regions of Pakistan*. Proceedings of the National Symposium, Jointly Sponsored by NEDUET & PakDA affiliated with International Desalination Association (IDA), Oct. 2001.
7. M. Shakaib, Prof. Dr. –Ing. Jameel Ahmad Khan, *Effect of Ultrasonic Vibrations on Fouling of Reverse Osmosis Membranes*, Proceedings of the Ninth Asian Congress of Fluid Mechanics, May 2002, Ispahan, Iran.

ADDRESS

Office:

Professor Emeritus
NED University of Engg. & Tech,
Karachi
Tel: 9243248, 9243262-8
Fax: 9243255
E-mail: advisor@neduet.edu.pk

Home:

E/6/1, Block-7
Gulshan-e-Iqbal
Karachi
Tel: 9243249, 4991581