

DR.P.Sivasankara Pillai

Founder Chief Consultant

Educational Background

Born on 3rd March 1935, Dr. P. Sivasankara Pillai graduated from the College of Technology, Banaras Hindu University in 1955 and subsequently obtained M. Tech and Ph. D degrees in Chemical Engineering from Indian institute of Technology, Madras. He retired as Professor and Head of the Department of Chemical Engineering, Government Engineering College, Thrissur, Kerala. He is presently the Chief Consultant of M/s. Envirochem Laboratories Private Limited.

- Ph. D in Chemical Engineering from Indian institute of Technology, Madras.
- M. Tech in Chemical Engineering, Indian institute of Technology, Madras.
- Graduated from the College of Technology, Banaras Hindu University in 1955.

Patents

10 Indian Patents on Process and Product development in the Field of Pollution Control.

- Process for the detoxification and decolourization of the effluents from rayon and paper pulp mill: Patent No: 158181 of 23.05.1983
- Process for separating colour bearing lignin from rayon and paper pulp mill effluents employing the acidic effluent from sulphate route titanium dioxide plants: Patent No: 1703617 of 26.10.1988
- Process for separating colour bearing and toxic materials from textile mill wet processing effluents employing spent pickling liquor from iron pickle units: Patent No: 170376 of 07.04.1989
- Process for separating colour bearing lignin from rayon and paper pulp mill effluents employing waste leach liquor from ilmenite beneficiation plants: Patent No: 170377 of 19.04.1989

Publications

Dr. Pillai has published so far about a dozen technical papers on his research in national and international journals. The process developed by him for mercury removal from industrial effluents has been widely acclaimed when he presented the same in the Diamond Jubilee Meeting of the American Institute of Chemical Engineers in Washington D.C. during November 1983 and now this process is well on the way towards commercialization.

- Mercury removal from industrial effluents presented in the Diamond Jubilee Meeting of the American Institute of Chemical Engineers in Washington. D.C. during November 1983.
- The salt recovery process for dyeing units, silicate recovery process for the textile printing units.
- Recovery of resources from refinery wastes for Reuse/ Exchange – A symbiotic approach for environmental protection.
- Methods for utilizing the wastes from several other industries for the treatment of paper mills, tanneries, textiles and rubber effluents.

Community Activities

Dr. Pillai has found many cost effective solutions for various pollution problems in industries and have developed innovative technologies to turn high pollution potential wastage into valuable resources. ELPL under the guidance of Dr. Pillai has developed and offered in house recycling techniques for various industries to greatly reduce their effluent load.

To economize his effluent treatment process, he put into practice the novel idea of employing Effluent for Effluent Treatment. His process for the purification of highly toxic and coloured effluent from textile mills and dye factories using the trade effluent from Travancore Titanium Products Ltd., Thiruvananthapuram is adopted by textile mills belonging to Madura coats, and some other companies. As a sequel to this, he developed and patented the methods for utilizing the wastes from several other industries for the treatment of paper mills, tanneries, textiles and rubber effluents.

- Developed and offered in house recycling techniques for various industries to reduce their effluent load.
- Developed and patented the methods for utilizing the wastes from several other industries for the treatment of paper mills, tanneries, textiles and rubber effluents.
- Developed the concept of Industrial Ecology to make pollution control - an economically viable proposition.

In his constant endeavor to make pollution control an economically viable proposition he mooted the concept of INDUSTRIAL ECOLOGY for waste utilization rather than the conventional end of the pipe treatment techniques being practiced today. He has developed and offered in house recycling techniques for various industries to greatly reduce their effluent load. The salt recovery processes for dyeing units, silicate recovery process for the textile printing units are a few of such contributions.

Awards Received

National Award for Excellence in the Process Development for the year 1984 sponsored by the Indian Institute of Chemical Engineers.

Indian Explosives Limited Award for Excellence in the Process Development for the year 1984 sponsored by the Indian Institute of Chemical Engineers.

U.P Government Award for interaction with industry in 1984.

Indian Merchant's chamber Award in 1986

ISTE Award for interaction with industries for the year 1987.

B.P. Poddar Memorial Award on management/control of environmental pollution in the year 1990 from Bharat Chamber of Commerce.

Dr. Pillai was the recipient of the National Award for Excellence in the Process Development for the year 1984 sponsored by the Indian Institute of Chemical Engineers. The knowhow of the process for the decolourization of pulp and paper mill effluent was transferred to Hindustan Paper Corporation who has successfully adopted the same.

In recognition of his outstanding contribution, he also won the Indian Merchants Chamber Award for Pollution Control in 1986. He is also the recipient of the ISTE Award for interaction with industries for the year 1987. He was also a member of a four member expert committee constituted by the Government of Kerala consequent on Bhopal Gas Tragedy, for implementing additional safety provisions for environmental protection.

He developed a process for converting the trade effluent of Travancore Titanium Products to a solid coagulant much better and cheaper than alum for water and waste water treatment. An industry based on this process was financed by IDBI under the "Venture Capital Fund Scheme" and is a permanent solution to the much debated effluent problem of TTP. This has won the BP Poddar Memorial Award for Environmental Pollution Control instituted by Bharat Chamber of Commerce. The technology has been transferred to M/s. Kilburn Chemicals Ltd, Tuticorin also to treat their trade effluent to make useful products and ELPL have done the detailed engineering for this project.