



JOHN V. ALBANO

SUMMARY

Specialist in Fluid Dynamics, Gas Dynamics and Heat Transfer, Design Analysis of Process Systems and related equipment with fifty years industrial experience; holds nine (9) U.S. and international patents and published, authored and co-authored fifteen (15) technical papers.

WORK EXPERIENCE

LXDE CORPORATION **2004 - Present**
Monroe Township, New Jersey

SENIOR MECHANICAL ENGINEERING SPECIALIST:

Engineering Consultant on special projects in design and analysis of process systems related to heat transfer, fluid dynamics and gas dynamics.

ABB LUMMUS GLOBAL (Now LUMMUS TECHNOLOGY, a CB& I Company) **1974 - 2004**
Bloomfield, New Jersey

- **TECHNOLOGY MANAGER (LTD)**
Responsible for development of advanced design concepts for ethylene plants including Cracking Heater Technology, Integration of Gas Turbine Cogeneration with Cracking Heaters, Cracking Coil Design – Developed unique method for controlling flow distribution in cracking coils which has been implemented successfully in newest heater designs. Developed design of new patented quick quench TLE used on the SRT VI cracking heaters.
- **MANAGER OF ENGINEERING – LUMMUS HEAT TRANSFER SYSTEMS**
Overall technical and managerial responsibility for engineering department of approximately 40 people: Department consisted of structural and thermal design section and drafting room for executing design of fired heaters, heat exchangers and air coolers.
- **MANAGER OF MECHANICAL ENGINEERING DEPARTMENT (LTD)**
Technical and managerial responsibility for mechanical engineering department consisting of 20 engineers: Disciplines included Materials and Welding, Equipment Design, Stress Analysis, Systems Engineering, and Thermal and Fluid Dynamic Analysis. The department provided a central source of expertise and guidance in non-process engineering disciplines to Lummus Operating Divisions and groups within LTD.
- **MANAGER, SYSTEMS ENGINEERING SECTION (LTD)**
Technical supervision of group of seven engineers involved with thermal and fluid dynamic design of critical systems and equipment components for process plants.
- **MECHANICAL SPECIALIST (LTD)**
Responsible for thermal and fluid dynamic design of systems and equipment components for process plants: Primary experience with ethylene and styrene units, but also included hydrocrackers, coal gasification and ammonia units. Developed new Ammonia Synthesis Reactor Design, awarded three patents. Developed hot char depressurization system for Coal Gasification Reactor.

FAIRLEIGH DICKINSON UNIVERSITY**1964 - 1989****ADJUNCT PROFESSOR, MECHANICAL ENGINEERING**

Taught evening courses dealing with heat and flow including Thermodynamics, Heat Transfer, Fluid Mechanics and Energy Conversion Systems. Also taught courses in Mechanics and Technical Writing.

ST. REGIS PAPER COMPANY**1968 - 1974****SENIOR RESEARCH ENGINEER**

Carried out R&D programs concerned with drying of paper and coatings, flow of pulp suspensions and flow of air solid mixtures in packaging machinery. Developed computer model accurately simulating dryer section of paper machines. Developed computer program for analysis of gas solids flows in passages. Patent awarded for new consumer product.

THIOKOL CHEMICAL CORPORATION**1965 - 1968****SENIOR ENGINEER**

Aerodynamic design and performance analysis of rocket and air augmented rocket propulsion systems including nozzles, inlet diffusers and thrust vector control systems. Participated in design of components for Surveyor, Bullpup, Condor, PLAAR and C-1 engine programs.

ARDE, INC.**1963 - 1965****ANALYTICAL ENGINEER**

Aerodynamic design and performance evaluation of propulsion systems for large solid propellant rockets: Design of vectorable nozzles and thrust magnitude control systems. Participated in design of vectorable propulsion systems for Minuteman missile.

M.W. KELLOGG COMPANY**1960 - 1963****RESEARCH MECHANICAL ENGINEER**

Development work on sodium amalgam/oxygen fuel cell power plant: Built and installed 20 kW prototype

GIBBS AND COX, INC.**1957 - 1960****DESIGN ENGINEER**

Analytical and design work in ship propulsion for commercial and naval combatant vessels. Estimation of surface vessel propulsion power requirements, model testing and propeller design. Designed replacement propellers for ocean liner U.S.S. United States.

M.W. KELLOGG COMPANY**1956 - 1957****ASSISTANT PROCESS PIPING ENGINEER**

Sized system components, prepared piping and instrument diagrams for process plants.

EDUCATION

B.S.M.E. Stevens Institute of Technology 1956
M.S.M.E. Stevens Institute of Technology 1959
Additional 10 credit graduate work towards ScD. Program at Stevens Institute of Technology **1959-1962**

PROFESSIONAL AFFILIATIONS

Life Member, American Society of Mechanical Engineers
Listed in Marquis Who's Who in America and Who's Who in Science and Engineering

PATENTS

U. S. Patent No. 7,004,085, February 28, 2006, Cracking Furnace with More Uniform Heating, Erwin Platvoet, J. V. Albano, F. McCarthy and J. P. Fell

U. S. Patent No. 5,816,322, October 5, 1998, Quench Cooler, J. V. Albano, K. M. Sundaram, H. A. Herrmann

U. S. Patent No. 5,464,057, November 7, 1995, Quench Cooler, J. V. Albano, K. M. Sundaram, H. A. Herrmann

Canadian Patent No. 1,309,841, November 10, 1992, Pyrolysis Heater, J. M. Fernandez-Bawin, K. M. Sundaram, J. V. Albano, C. Sumner, A. Rhoe

European Patent Application 059230A1, May 22, 1992, Pyrolysis Heater, J. M. Fernandez-Bawin, J. V. Albano

U. S. Patent No. 4,007,670, February 15, 1988, Insulated Containers, J. V. Albano, D. F. Smith

U. S. Patent No. 4,423,022, December 28, 1983, Process for Carrying out Catalytic Exothermic and Endothermic High Pressure Gas Reactions, J. V. Albano, G. Freidman

U. S. Patent No. 4,341,727, July 27, 1982, Apparatus for Carrying out Catalytic Exothermic and Endothermic High Pressure Gas Reactions, J. V. Albano, G. Freidman

U. S. Patent No. 4,461,761, July 24, 1964, Process for Carrying out Catalytic Exothermic High Pressure Gas Reactions J. V. Albano

PUBLICATIONS

"Opportunity NOX", M. Karrs, J. V. Albano, Hydrocarbon engineering, March 2002

"Design Pyrolysis Heater Using CFD Models", K. M. Sundaram, J. V. Albano, Hydrocarbon Processing, July 1997

"Firebox Modeling of SRT Cracking Heaters", K. M. Sundaram and J. V. Albano, AICHE Spring National Meeting, April 17-31, 1995, Atlanta, GA

"High Selective Ethane Cracking to Ethylene at Veba Oel Plant", K. M. Sundaram and J. V. Albano and K. Goldman, DGMK Conference on Selective Hydrocarbons and Dehydrogenations, Kassel, Germany, November 10, 1993

"Gas Turbine Integration in Ethylene Plants", Oil and Gas Journal, J. V. Albano, T. Fukushima, E. F. Olszewski, Oil and Gas Journal, February 10, 1992, 1992 AICHE Spring Meeting

"Dynamic Simulation of Ethylene Plant Gas Turbine Integration System Predicts Combustion Conditions and Pressure Excursions During Turbine Emergency Shutdown", John V. Albano and Robert H. Walz, ABB Lummus Crest, Dr. Suresh K. Shenoy and Gurdip Singh, ABB Combustion Engineering Nuclear Power. AICHE 1991 – International Meeting on Chemical Engineering and Biotechnology, June 12, 1991

"Application of Extended Surface in Pyrolysis Coils" J. V. Albano, K. M. Sundaram, M. J. Maddock, Energy Progress, September, 1988

"Recent Development in Pyrolysis Technology", J. V. Albano, K. M. Sundaram, AICHE Meeting, March 10, 1988

"A Continuous Hot Char Depressurization System for the Synthane Coal Gasification System", W. H. Van Sweringen, J. V. Albano, N. Stavropoulos, L. J. Hodas, J. Sideris, 86th AICHE National Meeting, Houston, Texas, April 1979

"Solution of the Drying Equations", J. V. Albano, M. Perez, G. Bernier, St Regis Project 9930, November, 1969

"Parametric Study of the Subsonic Combustion Ducted Rocket Cycles", J. V. Albano, RMD DS 100-72, December 12, 1966

"Liquid Injection Thrust Vector Control", A Review of the Effects of Pertinent System Variables and Performance Prediction Methods, J. V. Albano, RMD DS 100-67 November 3, 1966

"Air Augmented Rocket Systems", A Review of the Literature with Comments on the Gas Dynamic Aspects of the Problem, J. V. Albano, RMD DS 100-62, August 19, 1966

"Feasibility Study of a Cabin-Air-Circulation Temperature Control System for Manned Spacecraft", J. V. Albano and W. Doble, Arde, Inc., Report FR-9635-1, July 24, 1964. Prepared for NASA Contract NAS 1-3772

"Analytical Investigation of Cycle Characteristics of Brayton Cycle Space Power Systems", J. V. Albano, Arde, Inc. AT-1019R, May 23, 1963.



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