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IGNACIO DEL VALLE GRANADOS

M.Sc._ Mechanical Engineer

Mechanical Engineer with a strong academic background, including a Licentiate Degree in Mechanical Engineering from Universidad de Costa Rica, a Master's Degree in Energy Planning from Universidad de Costa Rica, and a Master's Degree in Generation and Energy Efficiency Management from Universidad de Cádiz. He has more than 25 years of professional experience as a consultant and designer of mechanical systems for industrial, commercial, institutional, and residential buildings. He has held management positions in several companies and served on boards of directors of professional organizations, including ACIMA and the Federated College of Engineers and Architects of Costa Rica (CFIA). He has been a university professor since 1995 at institutions including ITCR and Universidad Latinoamericana de Ciencia y Tecnología, teaching courses in thermodynamics, turbomachinery, ventilation, and air conditioning. He is the author of more than 20 technical articles on energy efficiency, maintenance, and air-conditioning system design published in specialized journals.

ACADEMIC BACKGROUND

- **[2015]** Master's Degree in Generation and Energy Efficiency Management, Universidad de Cádiz.
- **[2003]** Master's Degree in Electromechanical Engineering, with emphasis in Energy Management, Instituto Tecnológico de Costa Rica.
- **[1996]** Licentiate Degree in Mechanical Engineering, Universidad de Costa Rica.

PROFESSIONAL EXPERIENCE

- **[1998–Present]** Consultant in Mechanical Systems for Buildings, independent Mechanical Engineer.
- **[2004–2022]** Professional Engineering Corporation C.P.I. S.A. — Partner and Mechanical Engineer.
- **[2003–2006]** Multifrío S.A. — Project Manager.
- **[1999–2003]** A.F. Constructora S.A. — Operations Manager.
- **[1997–1999]** Instalaciones Electromecánicas I.E. de Costa Rica S.A. — General Maintenance Manager.
- **[1995–1996]** SIBAC S.A. — Maintenance Supervisor.
- **[1993–1994]** Dinámica de Fluidos S.A. — Research Assistant.

TEACHING EXPERIENCE

- **Instituto Tecnológico de Costa Rica**
 - **[2006–Present]** School of Electromechanical Engineering — Courses in Turbomachinery, Thermodynamics, Refrigeration, Air Conditioning, and Industrial Ventilation.
 - **[2004–Present]** Master's Program in Energy Management — Course: Advanced Energy Management.
 - **[1998–Present]** School of Occupational Safety and Environmental Hygiene Engineering — Course: Chemical Agents Control.
- **[1995–2007]** Universidad Latinoamericana de Ciencia y Tecnología — Professor of various engineering courses.

PUBLICATIONS

- **[2011]** *Refrigeration: A Contradiction of Thermodynamics?* Mantenimiento, No. 75.
- **[2010]** *Piping System Design for a Refrigeration Plant Due to Mechanical Friction.* Mantenimiento, No. 74.
- **[2010]** *Adequate Support Location for Piping in Air-Conditioning Systems.* Mantenimiento, No. 73.
- **[2010]** *Maintenance of Condenser Fins.* Mantenimiento, No. 72.
- **[2010]** *Selection of Material for Ducts in an Air-Conditioning System.* Mantenimiento, No. 71.
- **[2010]** *COP and Energy Efficiency Index in Air-Conditioning Equipment (COP and EER).* Mantenimiento, No. 70.
- **[2010]** *Area Load Factor: An Indicator of Energy Consumption in Air-Conditioning Systems.* Mantenimiento, No. 69.