

PHD. ING. WILLIAMS GONZALES MAMANI

DOCTOR IN MECHANICAL ENGINEERING - ENERGY AND FLUIDS AREA

Agreement between the University of Sao Paulo-Brazil and the University of Illinois

UC-USA MASTER'S DEGREE IN RENEWABLE ENERGIES APPLIED TO BUILDINGS

International University of Andalusia - Spain

MASTER IN MECHANICAL ENGINEERING - ENERGY AND FLUIDS AREA

University of Sao Paulo-Brazil

MBA SPECIALIZATION IN INDUSTRIAL PRODUCTION MANAGEMENT

Federal University of Sao Carlos - Brazil

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COCHABAMBA:

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Sarco Neighborhood - Cochabamba

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Current position:

Dean of the Graduate School of Engineering and Technology at

the Bolivian Private University

National Engineer Registry - RNI-SIB - 6347



SKILLS AND PERSONALITY -SKILLS

- Experience in the development, marketing, management and execution of academic training projects at the level of courses, diplomas and master's degrees.
- Experience in management, direction and execution of conceptual, basic and detailed engineering projects oriented to the industry, as well as research, application and development (R&D&A) in projects in the energy area
- Relationship with international companies and institutions linked to the energy sector and member of professional associations linked to the sector (SPE, ASME, ASHRAE)
- Experience in engineering consulting for projects in treatment plants, transportation and storage systems for liquid and gaseous hydrocarbons, generation of electrical energy in thermal power plants and from renewable sources (wind, photovoltaic and geothermal), as well as energy efficiency and audit projects in industries through the GreenPyme program.
- Specialized consultancy in the real estate construction sector for the application of bioclimatic architecture (natural lighting, energy efficiency, passive heating, evaporative cooling, natural ventilation)
- Experience and knowledge of project management by methodology *Front End Loading* of the *Project Management Institute (PMI)*, *lean construction* and the application of Integrated Management Systems within the framework of the management strategy for the development of a company or project.
- Knowledge of the legal and regulatory framework, codes and standards of the energy sector that regulate activity in the energy sector and the real estate and architecture construction sector.
- Entrepreneurial spirit, commitment to the company and continuous improvement, motivating teamwork and interpersonal relationships, respecting the company's strategic development policies.
- Ability to work under pressure, with a proactive attitude and always in search of results. Behavior based on respect, professional ethics and awareness of sustainable business development.

HIGHER EDUCATION AND POST-GRADUATE EDUCATION

- DOCTORATE, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN Agreement, Urbana IL, USA, UNIVERSIDADE DE SÃO PAULO-USP, São Carlos-SP, Brazil
PhD in Mechanical Engineering (2001)
Research area: Energy and Fluids, Multiphase flow in continuous and porous media.
- INTERNATIONAL UNIVERSITY OF ANDALUCIA, Huelva, Spain Master in Alternative Energy Applied to Buildings, (2000)
Research area: Solar cooling and natural ventilation
- UNIVERSIDADE DE SÃO PAULO, São Carlos-SP, Brazil
Master in Energy and Fluids, (1997)
Research area: Energy and Fluids, Computational Simulation of Processes.
- FEDERAL UNIVERSITY OF SÃO CARLOS, São Carlos-SP, Brazil
Specialization in Management of Production Processes, (1996)
Research area: Management of LPG Container Manufacturing Processes.
- TECHNICAL UNIVERSITY OF ORURO, Oruro, Bolivia
Bachelor of Mechanical Engineering, (1993)
Research Area: Continuum mechanics and finite element method

WORK EXPERIENCE

- BOLIVIAN PRIVATE UNIVERSITY – EDUCATIONAL FOUNDATION Position:
Dean and Director of the Graduate School of Engineering and Technology
Period: February 2009 – Present.
Location: Cochabamba, Bolivia
- BOLIVIAN PRIVATE UNIVERSITY – EDUCATIONAL FOUNDATION
Position: Academic Director – Diploma in Renewable Energies UPB-UMSS- Proj.ERASMUS
Period: February 2022 – 2024.
Location: Cochabamba, Bolivia

BOLIVIAN PRIVATE UNIVERSITY – EDUCATIONAL FOUNDATION Position:
Head of the Petroleum and Natural Gas Engineering Program
Period: February 2002 – January 2009
Location: Cochabamba, Bolivia

FASHION Cartons
Project: Energy Audit and Efficiency Plan in the use of steam and electric energy
Position: Project leader, 2016 – UPB Green SME Program
Location: Cochabamba-Bolivia

- AIR CONDITIONING AND REFRIGERATION CENTER (ACRC-Urbana, Illinois)
University of Illinois at Urbana-Champaign
Activity: Researcher in the area of Energy and Refrigeration.
Period: 2000 and 2001.
Location: Urbana-Champaign, Illinois-USA.
- ELECTRO AUTO S.A.
Company Air Conditioning Systems for SEAT Ibiza Vehicles
Position: Capacitor Research and Development Engineer for SEAT IBIZA vehicles. Period: January to May 2000.
Location: Madrid, Spain.
- ENERGY AND FLUIDS ENGINEERING LABORATORY
University of Sao Paulo
Activity: Researcher in the Area of Energy and Refrigeration.
Period: July 1996 to September 2001. Location: Sao Carlos-Sao Paulo, Brazil.
- SANITARY PORCELAIN JEIS
Porcelain and Ceramic Floors Factory
Position: Superintendent of the Manufacturing and Construction Project of the Ceramic Floor Plant (sheds, mills, silos, baking and drying ovens, conveyor belts, buckets, natural gas measurement bridges, combustion systems, atomizer). Period: 1994 to 1995
Location: Cochabamba, Bolivia.
- STEEL INDUSTRIAL COMPLEX
Factory of Steel Cylinders for Liquefied Petroleum Gas (LPG)
Position: Lead Engineer for pressure vessel projects according to ASME VIII Div.1 and ASME IX. Design and construction of annealing furnaces, Design and Construction of rolling mills.
Period: 1993-1994
Location: Cochabamba, Bolivia

ACADEMIC EXPERIENCE

- BOLIVIAN PRIVATE UNIVERSITY,
Manager and Academic Director of the following diploma and Master's programs:
 - Master of Science in Petroleum and Natural Gas Engineering
 - Master of Electrical Engineering and Energy
 - Master's Degree in Maintenance Engineering and Industrial Productivity
 - Master in Productivity and Quality
 - Master in Control Engineering, Instrumentation and Automation
 - Master in Engineering and Technology Management (focused on 8 industry sectors)
 - Master in Business Administration and Management for Oil & Gas Industry
 - Master in Business Administration and Management for Energy & Power
 - Master in Business Administration and Management for Civil Construction and Real Estate
 - Master in Business Administration and Management for Telecommunications & Networks
 - Master in Business Administration and Management for Integrated Business Management Systems
 - Diploma in Lean Six Sigma and Continuous Improvement in Industry and Business
 - Diploma in Renewable Energy Technology and Management
 - Diploma in Lithium, Green Hydrogen and Energy Storage
 - Diploma in Project Management and Direction according to PMI
 - Diploma in Agile Professional Project Management

- Diploma in Industrial Automation, Control, Intelligent Systems and IoT.
- Diploma in Safety, Environment and Occupational Health Engineering
- Diploma in Engineering and Technology of Electrical Distribution Systems and Smart Grids
- Diploma in Digital Architecture and BIM applied to Construction
- Diploma in Bioclimatic Architecture and Energy Efficiency
- Diploma in Engineering, Operation and Maintenance of Thermoelectric Power Plants
- Diploma in Electrical Power Systems Engineering
- Diploma in Technology and Management in Generation, Transmission and Distribution of Electric Energy
- Diploma in Engineering and Technology for Hydrocarbon Exploration and Production
- Diploma in Petroleum and Natural Gas Engineering
- Diploma in Petroleum and Natural Gas Technology and Management
- Diploma in Simulation and Optimization of Processes in the Hydrocarbon Industry
- Diploma in Engineering and Technology for Hydrocarbon Transportation and Storage

- TECHNICAL UNIVERSITY OF ORURO, Oruro, Bolivia
National Faculty of Engineering
Guest Lecturer of the Diploma in Natural Gas Applications, 2007
Subject: Natural Gas Transportation and Distribution Systems
- SAN SIMON MAYOR UNIVERSITY, Cochabamba, Bolivia Center for Higher Education (CESU)
Guest Professor of the Master's Degree in Legal Management of Hydrocarbons, 2005
Subject: Fundamentals of the Hydrocarbon Production Industry
- UNIVERSIDADE DE SÃO PAULO, São Carlos-SP, Brazil
Academic Monitor, Department of Mechanical Engineering, EESC, 1996-2000.
Subjects: Technical Thermodynamics I, Industrial Refrigeration, Heat Exchangers
- BOLIVIAN PRIVATE UNIVERSITY, Cochabamba, Bolivia
Part-time Professor, Department of Electromechanical Engineering & Production, 1994-1995.
Subject: Solid Dynamics II
- ORURO TECHNICAL UNIVERSITY, Oruro, Bolivia
Teaching Assistant, Department of Mechanical Engineering, FNI, 1990-1993
Subjects: Basic Algebra, Basic Physics I, Calculus I, Linear Algebra and Matrix Theory, Machine Mechanisms, Compression Machines and Pneumatics, Design and Construction of Steel Structures, Technical Mechanics I.

PARTICIPATION IN PROJECTS LINKED TO INDUSTRY AND INSTITUTIONS

- Project: EUBBC-Digital – EU ERASMUS
Level of Responsibility: Development of the Study Plan and Academic Director of the Diploma in Renewable Energy Technology and Management, UPB-UMSS agreement
Period: 2022-2024
- Project: Applied bioclimatic architecture in La Paz, case of Torres Montenegro
Level of Responsibility: Consultant
Related Company: Urbanova, Year: 2016
- Project: Energy efficiency audit at MODA cardboard factory
Level of Responsibility: Senior Advisor
Associated Company: MODA, Year: 2016
- Project: *Technical feasibility study of secondary recovery by water injection in Tatarenda field.*

Level of responsibility: Senior Project Advisor
Associated Company: Matpetrol. Year: 2011
- Project: *Application of Decline Curves and the Monte Carlo Model to Evaluate Reserves of the Bulo-Bulo Field.*
Level of responsibility: Senior Project Advisor
Related Company: Hydrocarbons Unit-Prefecture of Cochabamba. Year: 2009

- Project: *Optimization of the cooling system of the compression plant at the Vibora Plant.* Level of responsibility: Senior Project Advisor Associated Company: Bolpegas. Year: 2009
 - Project: *Reengineering of the Huayñacota Compression Station with the implementation of the Carrasco-Cochabamba Gas Pipeline.*
Level of responsibility: Senior Project Advisor Associated Company: IPE Bolivia. Year: 2009
 - Project: *Technical-financial prefeasibility study of a natural gas processing plant for obtaining diesel oil using the Fischer-Tropsch process*
Level of responsibility: Project Reviewer
Related Company: Hydrocarbons Unit - Prefecture of Cochabamba Year: 2008
 - Project: *Technical-economic evaluation of the implementation of a natural gas liquid extraction plant in the export branch to Argentina.* Level of responsibility: Project Reviewer

Related Company: YPFB Year: 2008
 - Project: *Technical-financial prefeasibility study of a hydrocracking plant to produce diesel oil from reduced crude oil and prospective study of the domestic market.* Level of responsibility: Senior Project Advisor
Related Company: YPFB Refining – Industrialization Management Year: 2008
 - Project: *Development of a Natural Gas Use Strategy for Changing the Energy Matrix in Cobija*

Level of responsibility: Project Reviewer
Related Company: YPFB Year: 2008
 - Project: *Sizing of Peripheral Instruments and Design of the Fire & Gas System and Emergency Shutdown of the Percheles Plant.*
Level of responsibility: Senior Project Advisor
Related Company: Total Services SRL and Chaco Oil Company Year: 2007
 - Project: *Separation and Piping System Design for the Project: "Optimization for the Recovery of Drainage Liquids in Recycling Compressor Scrubbers"*
Level of responsibility: Project Reviewer
Related Company: Bolpegas SRL and Petrobras Bolivia - San Alberto Plant Year: 2007
- Project: *Design, Construction and Assembly Engineering of the Tank Cooling System at the Guillermo Elder Bell Refinery.*
Level of responsibility: Senior Project Advisor Related Company: Conta Oil and Petrobras Refinación SA Year: 2006

- Project: *Technical and Economic Evaluation of Natural Gas Transportation Technologies for the Urban Population of Aiquile*
Level of responsibility: Senior Project Advisor
Related Company: Hydrocarbon Unit of the Prefecture of Cochabamba
Year: 2006
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LATEST COURSES, SEMINARS AND WORKSHOPS COMPLETED

- Energy Efficiency and Audit Course, Green SME Program of the Inter-American Investment Cooperation. 2016
 - PMI Project Management Workshop Course, PMI ConoSur Tour, Santa Cruz 2011.
 - Evaluation and Characterization of Hydrocarbon Reserves, Bolivian Private University. Speaker: Eng. José Camacho, Simon Bolivar University, Caracas-Venezuela. 20-hour course.
 - Economic Evaluation and Risk Analysis of Hydrocarbon Exploration and Production Projects. Speaker: MBA Mauricio Medinaceli M., Consultant in Petroleum Economics and former Minister of Hydrocarbons, UPB-Cochabamba. 20-hour course.
 - Senior Management in the Development of Competitiveness – Business Management System (BMS). Speaker: PhD. Osman Atac, UPB-Cochabamba. 16-hour course.
 - Specialized courses in Renewable Energy applications, International University of Andalusia, Huelva, Spain. 500-hour classroom course.
 - Course on the Development and Implementation of ISO 9000:2000 for a Quality Management System, Universidad Privada Boliviana, Cochabamba. 16-hour course.
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ACTIVITIES RELATED TO SCIENCE AND TECHNOLOGY MANAGEMENT AND TECHNOLOGY TRANSFER PROCESSES

- Manager of the YPFB-Andina New Professional Training Program in Hydrocarbon Exploration and Production, 2010.
- Training program manager for the YPFB Industrialization Management, 2008.
- Manager and Coordinator of the Specialization Project for Maintenance Technicians at the Gualberto Villarroel Refinery, Petrobras-Bolivia. (2006-Present)
- Manager and Coordinator of the Multi-Specialization Project for Operators at the Gualberto Villarroel Refinery, Petrobras-Bolivia. (2004-2005)
- Academic Director of the National Diploma Program in “Oil and Natural Gas Technology and Management” (2003-Present).
- Academic Director of the National Diploma Program in “Petroleum and Natural Gas Engineering: Emphasis on processing, transportation, distribution and refining of hydrocarbons” (2003-present).
- Academic Director of the Training Program for Hydrocarbon Management of the National Tax Service, Santa Cruz –Bolivia, (2004).

- Project Director of the Cooling System Research Project at the Quimbol Lever Soap Plant, Cochabamba, Bolivia, (2003).
- Member of the Science, Technology and Innovation Committee of the Chamber of Industries of Cochabamba, Bolivia (2002-Present)
- Member of the Competitiveness Committee of the Department of Cochabamba-Bolivia, (2003-Present).
- Invited as an expert in the Hydrocarbons and Energy sector by the Vice-Ministry of Higher Education, Science and Technology of Bolivia for the development of the National Science and Technology Plan, Cochabamba-Bolivia (2003).
- Principal Investigator, Automotive Refrigeration Systems Simulation, Energy and Fluids Laboratory, University of Sao Paulo, Sao Carlos-Brazil (1997).
- Principal Investigator, Heat transmission and pressure drop models in condensation processes of alternative fluids to CFCs inside tubes with micro ducts, University of Sao Paulo, Sao Carlos-Brazil (2001).
- Principal Investigator, Condensation Processes in Microchannel Ducts Used in the Refrigeration Industry, Air Conditioning and Refrigeration Center (ACRC), University of Illinois at Urbana-Champaign, Illinois-USA (2000).
- Research and Development Project Leader, Design of new condensation equipment for IBIZA automobile air conditioning using variable displacement compressors, Electro Auto SA, Madrid-Spain (1999)

LATEST PUBLICATIONS AND PARTICIPATION IN EVENTS

- Bolivia Gas & Energy International Congress, 2008.
- Press articles on the energy and hydrocarbons sector in the newspaper Los Tiempos with journalist Hans Soria. (2004 – present).
- Lecturer and reviewer of technical articles at the “Brazilian Congress of Mechanical Engineering”, 2008
- Participant of the Congress “Rio Oil&Gas Conference”, 2006, Rio de Janeiro-Brazil.
- Speaker at the “Bolivarian Congress of Mechanical Engineering”, 2004, Lima-Peru.
- Popular Article in ENERGOPRESS Magazine, Importance of Uncertainty Levels in the Chromatographic Measurement of Natural Gas, June, (2004).
- Speaker at the “Symposium on Alternatives for the Use of Bolivian Natural Gas”, Prospective of the Natural Gas Industry in Bolivia: The Potential of GTL Technology, Cochabamba-Bolivia, (2004).
- Speaker at the “National Conference of Private Entrepreneurs of Bolivia”, Technological Alternatives for the Development of Natural Gas Resources in Bolivia, Cochabamba-Bolivia, (2004)

- Invited as an Expert at the Proposal Forum for a National Gas Policy, Santa Cruz-Bolivia, (2004).
- Speaker at the Seminar on Development Strategies Associated with Hydrocarbon Resources, Technologies and Applications of Natural Gas, Tarija-Bolivia, (2003).
- Speaker at the Bolivarian Congress of Mechanical Engineering, Thermo-hydraulic study of the flow of coolants in aluminum sheets with micro channels, Lima-Peru, (2003).
- Scientific Article, International Journal of Refrigeration, Modeling and Experimental Evaluation of an Automotive Air Conditioning System with a Variable Capacity Compressor, Vo.25, p.1157-1172, 2002.

KNOWLEDGE OF LANGUAGES

- Mastery of the Spanish language
Mother Tongue
- Mastery of the Quechua Language
Mother Tongue
- English language proficiency
Graduated from the British Academy, Oruro-Bolivia (1989)
PhD studies at the University of Illinois at Urbana-Champaign, USA (2000-2001)
- Mastery of the Portuguese Language
Master's and PhD studies at the University of Sao Paulo, Brazil. (1995 – 2000)
- Basic French Language Courses at the
Alliance Française, Brazil. (1998)
- Basic command of the German language
Courses at the German Cultural Institute, Bolivia. (1993)

KNOWLEDGE OF SOFTWARE AND ICTs

Support software

- MS Office 2007 and MS Project
- Adobe
- Photoshop
- Visio
- Autocad
- Vector Works
- Video conferencing software
- Virtual education software
- Skype

Professional Software

- EES
- HYSYS
- GASCALC
- OFM
- Pipesim
- MBAL
- Matlab
- Eclipse

MEMBERSHIPS IN PROFESSIONAL SOCIETIES AND OF TECHNOLOGY MANAGEMENT

- Member of the Bolivian Society of Engineers, SIB
- Member of the "Society of Petroleum Engineers", SPE
- Member of the American Society of Mechanical Engineers, ASME
- Member of the "American Society of Heating, Refrigeration and Air Conditioning Engineers", ASHRAE.
- Registration in the INOVA Electronic Bulletin of the Center for Technology Policy and Management of the University of San Pablo-USP.
- Member of the Latin-Ibero-American Association of Technology Management, ALTEC