# MARCO ZAPATA, PEng.

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Member of APEGBC, BC as PEng; Member of OIQ, Québec as Engineer (standby) Chilean & Canadian Citizenship

#### **SUMMARY**

Marco Zapata is a Mechanical Engineer with over twenty five years of experience in engineering projects mainly in the Mining Sectors and Industrial Area. He has developed his career in Chile starting in the mining area in Codelco Chile doing stages and thesis work, as a maintenance engineer in a copper mine, in the industrial area, non metallic mining sector, and continuing in the consulting engineering area, working in Canada these last ten years. He has had progressive responsibilities, from design engineer, construction supervision, coordination and project manager.

## **EDUCATION**

- *Master in Engineering, Mention Project Management* (started Aug2011-standby for moving to BC-Canadá). École Polytechnique de Montréal.
- Improvement Certificate in Overseas Engineering (2007). École Polytechnique de Montréal.
- Degree in Mechanical Engineering (1992 date of emission). Universidad de Santiago de Chile. Canada Equivalence by MICC: Bachelor's Degree.
- Degree in Engineering (1988). Universidad de Santiago de Chile.

### **WORKING EXPERIENCE**

Oct 2013- July 2015: STT ENVIROCORP. Vancouver. Canada (resignation). *Project Manager* 

- Estimating and Project Cost Analysis. Planning and Carrying out projects of chemical makedown systems to neutralize pollutants (usually acid water) created in the ore or oil recovery process, additionally aftermarket services including optimization of chemical use to reduce costs and carbon footprint, including storage and handling of liquid and bulk material. Development of basic and detail engineering for all projects. Investment Project up to 7 MUS\$

July 2012- Sept 2013: SNC LAVALIN INC. Vancouver. Canada *Mechanical Senior Engineer* 

- Development of basic and detail engineering for all projects. Estimating and Project Cost Analysis. Redaction of technical specifications & contracts and technical support of other engineers: Flotation Machines, Slurry and Solution Pumps, Pumps Boxes, Process Tanks, and General Specifications. Prairie Creek Project for Zinc Canadian Corporation, located in the Northwest Territories of Canada.

2011-2012 : CIMA+. Montreal, Canada

Mechanical Leader New Studies & Mechanical/Material Handling Sector Leader

- Management of the material handling Area in relation to the engineering tasks, and last period, Mechanical leader of new studies, including evaluation and definition of equipment, development of basic and detail engineering for all projects, specially belt conveyors (using Belt Analysis Software & CEMA5). Additionally, redaction of technical specifications, contracts and technical support of other engineers - bid analysis and revision of general documents (Conveyors (overland), Thickener, Dust Collector Systems, Screens, Samplers, Slurry Pumps, Apron Feeders)-Project: Bloom Lake Phase II-Cliff Resources-Fermont, Québec, Canada.

2010 : BBA Inc. Montreal, Canada

Mechanical Engineer

- Development of basic and detail engineering for all projects.
- Technical Resource to develop different projects according to their expertise-Mining&Metals Department.
- Redaction of Technical Specifications and Bid analysis (Thickeners, Pulp Agitators, Slurry Pumps, Screens, Refinery equipment)-Project : Detour Gold-Ontario, Canada

## 2008-2009: SANDWELL EPC INC. Montreal. Canada

Mechanical Project Engineer

- Development of basic and detail engineering for all projects. Calculate of conveyors (using Belt Analysis Software & CEMA 5), chutes design, redaction of technical specifications (conveyors, stacker, reclaimer). Project in Port of Sept-Iles IRON ORE Co. of Canada IOC, Project in Port Jorf Lasfar OCP Morocco and Project GPEC Green Planet Energy Corp. Mexico.

# 2004 – 2006: SQM S.A. (SOQUIMICH Chili).

Project and Engineering Chief - Salar de Atacama Plant.

SQM is a company that produces fertilizers and non metallic products (nitrates, sulfates, potassium, iodine, salts, boric acid). Moreover, SQM is the major producer of lithium in the world.

Responsible of the Estimation, Design, Implementation, Contracts and Start Up of all investment projects related to the optimization of the process and facilities. Investment Projects up to 20 MUS\$, more than 100 people in charge. For example: Mine Development Plan, Modification and Improvements of Belt Conveyor Systems, Dust Collection System, Ventilation and Air Conditioning System, Process Pipelines, Fire Protection System, Pump Systems, Reparation Foundations of Buildings, Modification of Flotation Cells, Design and installation of Lixiviation Tank, Thickeners analysis, and Undermine Control of the Facilities.

## 2001 – 2004: AINDEP LTDA

Project Manager.

Consultant Company in the Food/Beverages Industry and Mining area.

Evaluating, Planning and Carrying out projects. Investment Project up to 1 MUS\$ and more than 20 people in charge; for example: Fabrication of Stainless Steel Tanks, Pasteurization Systems, CIP Cleaning Rooms, Syrup Rooms, Process Piping Calculation, etc...

## 2001: BESTAD S.A.

Supervisor Construction Engineer.

Construction Company.

Project Planning of the structural Frame of a Sound Stage (Quinta Vergara) for 15000 peoples and Roof Erection of a Parking Building for 1280 vehicles. Investment Project up to 1 MUS\$ and more than 50 people in charge.

## 1996 – 2001: TPI S.A. Technology of Industrial Processes.

Engineering Manager.

Commercial & Engineering Company of Equipment with focus in the Food Area & Mining Industry. Improving and expanding client portfolio, as well as structuring and forming groups of engineers and assemblers. Responsible for the business development, cost estimation and direct planning and implementation of different projects in the mining, industrial, food and beverage/wine industry in Chile, Mexico, Brazil, Argentina, Peru and Bolivia. Investment Project up to 6 MUS\$, more than 40 people in charge; for example: Wineries, Milk and Cheese Production Plants, Juice Production, CIP

Cleaning Systems, Pasteurizing Equipments, Syrup rooms, Bottling Assembly Lines, Tanks for mining applications, Process Piping Calculation and Installation.

1993 - 1996 : CCU S.A.

Project Engineer.

CCU is the major company in Chile that produces beer, moreover, wine and other beverages.

Development, estimation, planning, implementation, commissioning and start up of expansion projects for the different production sites throughout the country. Investment Projects up to 5 MUS\$ and more than 50 people in charge; for example: Ammonia Refrigeration System, Pasteurizing systems, Bottling Assembly Lines, Recuperation Product Systems, etc...

1991 – 1992 : AUTOMIND LTDA.

Maintenance Engineer.

Responsible for the development of maintenance programs for Anglo American Corporation – Los Bronces Copper Mine in Chile. The tasks involved planning and evaluating, preventive and corrective maintenance programs of equipment. Specifically Vibration Analysis of Ball Mills SAG, Vibrating Sifters, Crushers, Flotation Cells and Slurry Pumps.

1990 – 1991: CODELCO CHILE – Underground Copper Mine "El Teniente".

Development thesis work "Functional Design of a Rock Hammer" by FEA Finite Elements Analysis.

1988 – 1989: CODELCO CHILE – Underground Copper Mine "Andina".

Professional stages: Evaluation of Maintenance Programs-Vibration Analysis for all rotating equipment of the mine. Codelco is the major producer of cooper in the world.

## TRAINING COURSES

- "Planning and Project Control". École Polytechnique, Montréal (2012)
- "Entrepreneurship". École Polytechnique, Montréal (2012)
- "Processus and Configuration of Projects". École Polytechnique, Montréal (2011)
- "Industrial Boilers". CIPE Institut, Montréal (2009)
- "French". Université de Montréal (2007).
- "English". Mcgill University (2007).
- "French". Saint Paul Institute. Montréal. (2006).
- "Project Evaluation". Universidad Católica de Chile (2005).
- "Design Criteria for Stainless Steel Tanks". Arce & Recine Asociados (2000).
- "Design of Line Processes for Fluids". C&P Institute. (1997)
- "Planning and Projects Controlling". Universidad de Santiago de Chile. (1994)
- "Microsoft Project". INFOLAND. (1993)
- "Maintenance System Reliability". Universidad de Santiago de Chile. (1992)
- "Diesel Motors and Ground Movement Machinery". Universidad de Santiago de Chile. (1991)
- "ALGOR" Software of FEA Finite Elements Analysis. Universidad de Santiago de Chile. (1991)

#### PROFESSIONAL PROFILE

- Excellent interpersonal relations.
- High efficiency to work under pressure and tight deadlines.
- Interest in integrating and leading working teams with a strong motivation for project development from a technical and financial viewpoint.

### ADDITIONAL INFORMATION

- Languages : Spanish (Native), French and English advanced level. Software's knowledge : MSOffice, MSProject, Belt Analysis, AUTOCAD and CATIA V5