SERGIO PALOMBA

Burghaldenstrasse, 1 • 5600 Lenzburg, Switzerland
+41 0782242607 sergio.palomba@outlook.com

ENGINEERING & MANUFACTURING MANAGER
NEW PRODUCT / TECHNOLOGY INTRODUCTION EXPERT
QUALITY LEADER

Dynamic and innovative manager with over 15 years of engineering / manufacturing professional experience; including quality leadership, risk management, Black Belt assignment and certification. Adept at identifying critical gaps in engineering and manufacturing processes, designs and developing cutting-edge solutions that reduce costs and improve overall efficiency. Proven history of researching, analysing, selecting and introducing new technologies to ensure competitive advantage. Aptitude for training and mentoring colleagues. Strong expertise in machine dynamics, manufacturing technologies, Lean Six Sigma, quality assurance and control, New product and technology introduction quality process.

Areas of Strength

Lean Six Sigma DIMAIC/DFSS • Continuous Improvement • Quality A/C • Risk Management • Research & Development • Non Conformance and Root Cause Analysis NCR / RCA • Rotor Dynamics • Manufacturing • New Technology/Product Introduction NTI/NPI • Cost Analysis & Control • Bearing Devices • Vibration Reduction • International Standards • Adult Training

PROFESSIONAL EXPERIENCE

ALSTOM Power (Switzerland) – GE Power • 2013-present

- **Instrumentation Engineering - Continuous Improvement**

TTTVI Instrumentation Application and Measurement

- Project risk assessment FMEA and RCA management
- "Instrumentation Delivery Process": WIA creation, Quality assurance reviews, Quality control metrics and value Stream Mapping for Continuous Improvement.
- Instrumentation & Measurement projects (Core Tech / CAPEX) budget monitoring including customers interface meetings.
- Manufacturing Project Manager for introduction of new parts in production

GENERAL ELECTRIC Energy - Oil & Gas, (Florence, Italy) • 2006 – 2013

- **Engineering & Manufacturing Manager (direct and functional reports)**

Engineering & Manufacturing New Technology Introduction (2011 - 2013)

Build and manage a group of local and global engineers to identify and resolve any manufacturing / technology gap and introducing new technology for new products (GE MGTP - NTI/NPI processes). Perform suppliers and technology scouting including qualification process and quality auditing. Attend technology expositions and symposiums to identify new technologies and improve competitive advantage. Analyse Eng. - Mfg. processes to reduce costs and enhance overall efficiency; develop and implement appropriate solutions with extensive application of LSS.

Specific Accomplishments:

- Saved over 1 M$ / year costs by introducing new manufacturing technologies. Averted customer complaints and preserved company reputation by fixing underperforming manufacturing processes before critical fault, e.g. rotor balancing and impellers machining.
- Leading Direct Material and Productivity (DMP) projects over 2 M$ / year cost saving.
- Team Growth by hiring global resources and introducing trainee rotation assignments.
- Leading members of Production Preparation Process 3P workout for centrifugal compressors.

- **Lean Six Sigma & DFSS Black Belt / Technical Leader**

Engineering Advanced Technology - Quality Assurance & Control (2008 to 2011)

Managed advanced technology quality assurance and quality control utilising Design for Six Sigma (DFSS) methodologies: FMEA, RCA, QFD, DfM, D2C. NCR management: analysed issues to determine root causes, creating and applying solutions to prevent findings propagation. Led and evaluated various design projects, including a permanent magnet motor-stator arrangement and modal balancing.

Specific Accomplishments:

- Increased potential profits $150K per year by creating a modal balancing technique for Fast Centrifugal Compressors' Rotor and improving the high-speed balancing (low vibration levels).
- Recognised as a DFSS Black Belt role model through essential role in bringing GE Oil & Gas DFSS to maturation.
- Provided Training and mentoring for over 100 colleagues in Lean Six Sigma and DFSS

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- **Lead Engineer**

New Product Introduction Mechanical Design (2006 to 2008)

Led several design projects including award-winning vibration reductions and balancing such as the Subsea Compressor Blue-C and a permanent magnet motor.

Specific Accomplishments:

- External Customer nominal appreciation letter for the sound results given with a stability analysis of a steam turbine operating on site: the letter was sent from the customer to the Engineering SVP and afterwards published on the GE intranet.
- Reduced costs $200K per year by developing and implementing Direct Material Productivity & Cost out projects.
- Led a team in the development of Subsea Compressor Blue-C. Specific project on first ever three bearings high-speed balancing that demonstrated a smooth rotor string test with Engineering Award in 2009.
- Increased profits $120K per year by developing a new balancing procedure that significantly reduced vibrations, set new standards for vibrations in the late phase of machine commissioning, and received the 2007 General Manager Award.

SARAS Refinery S.p.A, Italy • 2002 to 2006

- **Machine Diagnostics Consultant**

Turbo machines diagnostics performing vibration measurement, analysis and stability assessment including IGCC Combined Cycles Power trains; Catalytic Cracking blowers and expanders; High Pressure hydrogen compression trains. Machine maintenance interval extension and suppliers technical discussions support.

UNIVERSITY OF CAGLIARI, • 2004 to 2006

- **Researcher (Contract)**

Perform research and analyses on turbomachine and structural dynamics including refinery turbo compressors and power machines stability; vibrations, diagnostics and balancing measurement software development (Lab View).

- University lectures, assistant and tutor for Applied Mechanics.

ADTEC LTD, Ireland • 2001

- **Project Engineer**

Evaluated and developed prototype machine for human blood vessel implantation production to determine and resolve any defects.

- Enhanced productivity by analysing and redesigning biomedical device production machine.

BÖHLER HOCHDRUCKTECHNIK, Kapfenberg, Austria • 1999 to 2000

- **Project Engineer**

Created calculation sheets and design templates to calculate international standards and codes for high pressure vessels and equipment.

- Enabled the company to comply with more international standards for product calculation.

FORMAL EDUCATION

Doctor of Mechanical Design (PhD) (2005)

Turbomachinery rotor and structural dynamics

Università di Cagliari & Politecnico di Milano (POLIMI), Italy

Master of Science in Mechanical Engineering (MS) (2000)

University of Cagliari, Italy & TU Graz, Austria

PROFESSIONAL AFFILIATIONS

Member, American Petroleum Institute (API)
Member, International Committee for API Standards (684 & 617 Revision)
Member, American Society for Quality (ASQ)
Former Member, Design for Six Sigma GE Corporate Council

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ADDITIONAL TRAINING

- Leadership Development Course – GE - Crotonville Leadership
- Project Management, Communication Skills, Time Management,
- Performance Measurement at GE
- Quality in Action - Quality Management Course
- Class training for Engineering Root Cause Analysis and FMEA Coaching
- Quality Regulatory Assurance at GE Helfcare
- Change Acceleration Process Coach – Essential Leadership Training
- Train the Trainer certificate for LSS, GB and BB – GE Corporate My Six Sigma
- Black Belt Lean Six Sigma DFSS Class Training & Proficiency Test – GE Corporate My 6 Sigma
- Modal Analysis Theory & Testing ISMA29 – Katholieke Universiteit, Leuven, Belgium
- Kinematics Synthesis of Skew and No-Circular Gears – Università degli Studi di Cassino, Italy
- Dynamic & Vibration models of Mechanical Systems, Diagnostic & Control Measurements of Machines – Politecnico di Milano, Italy
- Computer Aided Design of Mechanical Structures, Vibration Analysis, Modal Analysis - Università degli Studi di Cagliari, Italy

INTERNATIONAL PATENTS (Lead Inventor)

- Bearing Device, Retention Mechanism – PN 10177340.6 – 2424
- Bearing Device, Oil Distribution Mechanism – PN 10177343.0 – 2424
- High Pressure Compression Unit for Process Fluids for Industrial Plant – PN 10168793.7 – 2124
- Hyper High Pressure Pump for Integratec Compressor Line – Docket 234578
- Auxiliary Gas Bearing for Oil Lubricated Compressors & Expanders – Docket 238052
- New Hub for Rotor to High Speed Balance Bunker Coupling – Docket 239230
- Integrated Sealed Expander – Docket 243318
- Tower Compressor – Docket 22274

PUBLICATIONS

- Stability Analysis of a Centrifugal Hydrogen Compressor. IFToMM 7th International Conference on Rotor Dynamics September 2006 in Vienna, Austria
- Analisi dinamica dell'interazione tra un sistema di generazione di potenza e la sua struttura di supporto. Il sistema expander della SARAS S.p.A - PhD Thesis, 2005
- Dynamic Analysis of Complex Interaction between Power Production Turbo Machinery and Its Supporting Structure. ISMA 2004, International Conference on Noise and Vibration Engineering, Leuven (B), Proceedings Paper number 356
- ERASMUS in Graz: Eine Flut neuer Eindrücke Technische Universität Graz – Bericht 1998-1999

COMPUTER SKILLS

Minitab, Chrystal Ball, GEN-III tools, CATIA®, Autocad 2D e 3D, Finite Element Modelling ANSYS, LabView, C, Matlab, Mathcad. ADRE, Six Sigma tools, Microsoft Office (Excel, PowerPoint, Word, Outlook)

LANGUAGES

Italian, English, German

I agree to disclose my personal information according to the law.
Additional details are available on request.