

Yerman J. Merel G.

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Mechanical Engineer with international experience in large-scale tunneling and infrastructure projects across Panama, Peru, and Germany. Skilled in bridging design and execution phases, with hands-on expertise in static analysis, FAT procedures, and equipment installation. Recognized for delivering efficient, field-proven engineering solutions that enhance reliability, safety, and performance.

EDUCATION

Technology University of Panama
Bachelor of Science in Mechanical Engineering
Relevant Coursework: Numerical Computations, Feedback Control Systems

Panama City, Panamá
Jan 2018 – Dec 2024

PROFESSIONAL EXPERIENCE

Herrenknecht Tunnelling Services Panama Corp.
Project Engineer

Panama City, Panamá
Jan 2025 – Jul 2025

Perú Operation (3 months) – On site

- Managed on-site engineering activities for TBM component replacement, coordinating logistics and quality checks that reduced assembly time by **10%** and ensured **zero operational delays**.
- Executed multi-mode TBM track replacement operation and preventive maintenance on the main drive system, maintaining **100% operational uptime** during excavation.

Germany (4 months) - Hudson River Project (USA) – On site

- Produced FAT reports and design optimization recommendations adopted by project teams, improving assembly accuracy by **15%** and ensuring **compliance with international FAT standards**.
- Conducted Factory Acceptance Testing (FAT) for main bearing system alongside client representatives, ensuring compliance with technical specifications and performance standards.

China Railway Tunnel Group Co., LTD
Field Engineer of Tunnel Boring Machine and Superficial Facilities (Intern)

Panama City, Panamá
Aug 2024 – Jan 2025

- Eliminated 100% of severe pipeline incidents by designing and implementing corrective solutions including support systems for unstable terrain, pipe handling methods, and provisional sections for operational continuity.
- Developed standardized technical documentation adopted as an official reference by QC and Engineering teams, **reducing documentation errors by 20%** and improving cross-team efficiency.
- Verified existing pipeline systems through inspections, pressure testing, and assembly analysis across tunnel operations
- Resolved critical system failures threatening project deadlines, **preventing potential penalties of over \$250,000** and restoring client confidence.

TRAINING & COURSES

- A Hands-on Introduction to Engineering Simulations** – Cornell University, Expected (Nov 2025)
- Design of Industrial Piping Systems Specialization** – Larsen & Toubro EduTech, Expected (Nov 2025)
- Design of Thermofluidic System** - Technology University of Panama (Aug 2023)
- Fluid Technology, Hydraulic and Lubrication** - HERRENKNECHT AG (Jun 2025)

ADDITIONAL

Technical Skills: Advance in CAD (SolidWorks, AutoCAD, Inventor), ANSYS, Microsoft Office

Programming Skills: Proficient in Python, MATLAB, JavaScript

Languages: Spanish (Native); English (B2 - Full professional proficiency); German (A2 - Elementary Proficiency)

Awards: Finalist – National Scientific Research Conference (Dynamic Vibration Project, 2023)