

Marco Dieleman

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Experience Summary:

Chemical Engineer with over 25 years of experience in creating, developing and using analytical modeling software for the power and co-generation industries. Founded consulting companies in the USA and Thailand. Worked on a variety of power plant research projects, feasibility studies, acceptance test calculators, fuel demand models, re-powering studies, dispatch optimization studies, performance optimization studies, and on-site troubleshooting. Expert in using GateCycle and EbsilonProfessional, heat and mass balance software products, and Efficiency MAP, a condition monitoring system involving statistical methods and on-line data acquisition. Developed large pieces of the GateCycle software code. Broker for Ebsilon Professional heat balance software and related VTU Energy software solutions.

Power Plant Expertise

- GateCycle Expert
- Performance and Condition Monitoring
- Power Plant Design and Performance Evaluation
- Gas and Steam Turbines, Pumps
- Fossil Boilers, Heat Exchangers
- Gasification, Fuel Cells, Desalination

Software Development Expertise

Software Platform: Microsoft OS

Languages: C/C++, Fortran, Java, HTML, Perl, SQL and Visual Basic

Applications: GateCycle, Ebsilon Professional, Microsoft Visual Studio, Microsoft Office

Professional Experience:

M&N Power Solutions Ltd., Thailand (2012-present)

Co-Founder, Managing Director, Senior Consultant to the Power and Water Industries

- Delivered consulting services to the power industry using both Ebsilon Professional and GateCycle
- Broker for and support the Ebsilon Professional heat balance software owned by STEAG Energy Services GMBH
- Delivered simulation models for combined cycle and coal fired plants to utilities in South East Asia (Thailand, Malaysia, Korea)
- Feasibility and optimization studies for thermal energy storage designs, wet compression retrofit studies.(USA)
- Created analysis software for the power industry

World Wide Energy Solutions, Mountain View, CA, USA (2004-2017)

Sole Proprietor, Founder, Senior Consultant to the Power and Water Industries

- Delivered consulting services, such as fuel demand models, dispatch optimization models, PPA-bid support and design optimization to the power and water industries (USA, UK, Oman, Qatar, Bahrain, UAE, KSA, Thailand)
- Re-powering and retrofit studies for combined cycle plants as well as coal plants (USA, Thailand)
- Created and improved analysis software for the power industry (USA, Austria)

General Electric Corporation, Menlo Park, CA, USA (1999-2004), (GE acquired Enter Software and its sister company in 1999)*Software Development*

- Completed development of several enhancements to the GateCycle code, which are crucial to GE Power Systems' bidding process (steam turbine, heat exchangers, gas turbine, pumps, cooling towers etc.)
- Provided worldwide technical support to over 200 GateCycle customers. Established and maintained high quality ratings based on customer satisfactions surveys
- Implemented Acceptance Test Calculations for an Enhanced Oil Recovery site with 4 GT, HRSG and ASU trains in Mexico, allowing the plant to be handed over to the new owners
- Taught over 20 GateCycle training courses, many of which were sold out
- Wrote and edited over 500 pages of the training manuals and on-line help for GateCycle
- Earned "Top" performer status (top 20% of GE's employees)

Technisches Büro für Energietechnik dr. Pechtl, Graz, Austria (1996-1999), (a sister company of Enter Software, Inc.)*Project Management, Software Development, Research & Development*

- Developed and enhanced GateCycle's coal combustion calculations (fossil boiler, fluidized bed boiler, feed water heaters), doubling the market potential
- Researched advanced energy systems for EPRI (fuel cells, ammonia cycles), leading to papers and publications for the customer
- Conducted feasibility studies for Austrian customers (OMV, DrauConsulting), enabling the customer to make an informed decision which power plant technology to chose for their applications
- Mentored and trained several new employees. Increased the consulting team from 2 to 7 members
- Worked on several Efficiency MAP installations (Akzo Nobel, Stork, HEW)

Enter Software, Inc., Menlo Park, CA, USA (1992-1996)*Software Development, Research & Development*

- Improved modeling algorithms of GateCycle software code (gas turbine, etc.)
- Led consulting projects for Enter Software's most important customer, EPRI, on advanced power systems, such as IGCC, CHAT, ISCC. These studies resulted in several publications and patents for the customer
- Constructed detailed calculation models for several Efficiency MAP installations (Florida Power & Light, Florida Power Corp)

Education:

- Engineer(M.S.), Chemical Engineering, Eindhoven University of Technology, The Netherlands
- Took several computer classes through University of California Extension Programs, C, C++, C#, Java
- Successfully completed many online learning classes through the Coursera platform, such as Machine Learning, Python Pogramming, Wind Energy, Solar Energy and Sustainable Energy classes
- Successfully completed University of Waikato's MOOCs on WEKA, data mining software
- Fluent speaker in Dutch, English and German. Reading skills in: French and Spanish

References:

available on request