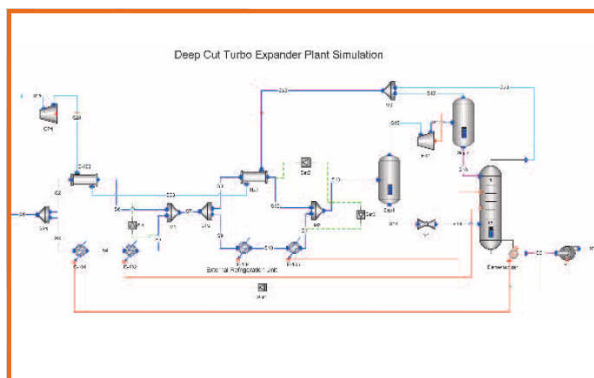




**PROFESSIONAL
CONSULTING
AND
SIMULATION
ENGINEERING**



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ABOUT US

SimPro was born out of the need for a dynamic and flexible process design and simulation solution in a market dominated by rigid conglomerates. The engineering and management strengths of different individuals were combined to form an association that can provide complete project and engineering solutions to their clients. We are organized to provide quality, on time, responsive and competitively priced, multi-disciplined consulting engineering, design, and drafting services to a diversity of industrial clientèle.



Our focus is on providing professional engineering design and simulation, and project management services for multi-disciplinary projects in the chemical and metallurgical processing industries of Southern Africa. These services include feasibility/scoping studies, conceptual, basic and detailed engineering, process simulation, custom software development and project management services.

Our key staff and alliance partners are well respected in their areas of expertise and have been involved with many key and successful projects in South Africa and internationally.

VISION

SimPro aims to be the preferred contractor for Process Engineering, Plant Design and Simulation in Southern Africa through our commitment to excellence.

MISSION

Our company philosophy is to provide our customers with a high level of service which is consistent, reliable and cost effective. We maintain and improve our wide range of skills by investing in an on-going program of training and professional development. This allows us to nurture a company-wide team spirit, which ultimately helps our clients to achieve their goals in a cost effective and timely manner.

CORE VALUES	OUR COMMITMENT
<p>Our core values can be summarised as follows:</p> <ul style="list-style-type: none">• To put the client first and understand the issues as seen by them• To work with our clients and other partners to achieve their goals• To seek innovative yet cost effective solutions for their businesses	<p>To work in close collaboration with our clients, ensuring that we both understand and help to address current and future needs, delivering high quality value for money solutions through our own efforts and those of our supply partners.</p>

METHODOLOGY



We strive to continually improve the services, which we provide to our clients by agreeing on the priorities for each project at commencement and focusing upon them. This focus applies equally to safety, quality, cost and timescale with zero defects.

We undertake to operate at all times in a professional manner and to provide sufficient and appropriate resources to succeed.

We will, where possible, identify opportunities, which will reduce cost and timescales thus providing a "Value Added" service to our clients.

The approach to a project and the execution thereof depends on the business driver for that project. This may include cost (capital and operating), process feasibility, schedule, process stability, other factors or a combination thereof. We are committed to establish an appropriate execution approach, in close co-operation with our clients, to ensure that the business objectives are being addressed. We do this by structuring our approach along the following guidelines:

<p style="text-align: center;">INNOVATION</p> <p>Every project is different. Different projects require different approaches to execution, although retaining the fundamentals of quality, safety, governance and control. Our success is one hundred percent dependant on the commitment and innovation of our highly skilled and experienced personnel, and on that of our strategic alliance partners.</p> <p>Every shareholder, director and employee realises that a commitment to innovation is the key to success.</p>	<p style="text-align: center;">FLEXIBILITY AND RESPONSIVENESS</p> <p>We are a small company, strengthened by our strategic alliances and close relationships with recognized service providers in the related fields. The one-size-fits-all approach is not part of our values and to further our belief in innovation we commit to being flexible to our clients' business needs.</p>
<p style="text-align: center;">PARTNERING</p> <p>Strong and appropriate partnerships result in the best projects. Ongoing escalating costs enforce this simple truth. Professional and direct field service providers alike recognize that their ability to leverage their resources without undue capital investment is through suitable partnering initiatives. These associations bring a true one-stop-shop to clients, thereby minimizing efforts and costs associated with the appointment and management of numerous sub-contractors.</p> <p>We also extend our partnering approach to include our clients. Success is further enhanced by early and full co-operation between the client and the project team ensuring timeous transfer of knowledge and agreement of the scope of work.</p>	<p style="text-align: center;">COMPLETE SOLUTIONS</p> <p>SimPro offers a full range of engineering, design, simulation and project management services. Through our partnering approach we are able to draw upon the most appropriate expertise in mechanical, piping, civil, structural, electrical and instrumentation engineering and design resources.</p> <p>Our partners have been involved in the development and construction of processing plants across all sectors of the chemical processing industries. The total project life-cycle is accommodated within the range of services we provide, from idea generation to beneficial operation, and with world-class experience in execution of all the phases of a project.</p>

PROFESSIONAL SERVICES

The following is a summary of the services that are available through SimPro. These services can be tailored to suit the individual client's needs.

ENGINEERING & DESIGN

With vast experience in both manufacturing operations and design, our process engineers can address all aspects of your project from a practical as well as a theoretical perspective. We combine an extensive knowledge of unit operations with an ability to partner with technology suppliers to ensure you derive maximum benefit.

Full spectrum of engineering and design services are available to ensure successful completion of designs and specifications for multi-disciplinary projects. All designers and engineers are selected on the basis of industry specific experience and know-how.



We continuously strive to produce the most accurate designs as soon as possible, to minimize costly changes and additions during later phases.

A thorough approach to the conceptual design phase of a project can prove critical to its overall success or failure.



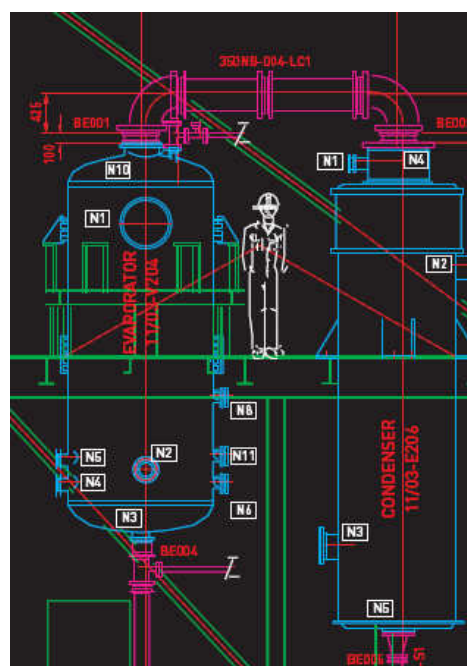
Our multi-disciplinary engineers come from a variety of backgrounds, many having worked directly for operating companies. This gives us a broad understanding of operational constraints which may exist both in project design and implementation, and allows us to formulate appropriate strategies to meet your key objectives. Frequently we are able to propose alternative process schemes for evaluation. We can also address

constructibility issues at an early stage, in some instances identifying parallel activities which will allow for early project completion with a corresponding improvement in return on investment.

We have a structure built on the foundation of quality detailed engineering practices and management procedures headed by experienced, chartered engineers from specialist chemical /petrochemical industry backgrounds.

As a SimPro client, you are assured of a professional, comprehensive, reliable and flexible approach utilizing modern operational practices. This translates into an extremely competitive service without compromise, often resulting in significant financial savings throughout the project life cycle.

We have in-house access to appropriate software and systems to ensure the most accurate designs and engineering specifications. Of paramount importance is the maturity to accept that changes occur during the execution phases of a project. With this inevitable fact in mind we have a Changed Documentation and Control System in place to ensure early impact notification and assessment of all valid changes.

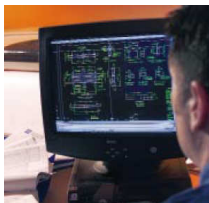


Typical deliverables per phase include:

CONCEPT / FEASIBILITY	BASIC ENGINEERING	DETAILED ENGINEERING
<ul style="list-style-type: none"> x Scope Definition Phase x Engineering Investigations/Idea Generation x Block Flow Diagrams x Preliminary Mass & Energy Balance x Preliminary Equipment Lists (Major Mechanical) x Overall Plot Plan x Very Rough Order of Magnitude Cost Estimate x Initial Project Viability Assessment x Basic Engineering x Process Flow Diagrams x Overall Process Description x Mechanical Flow Diagrams x Equipment List & Data Sheets x Control Philosophy x Instrument Index & Data Sheets x Pipe Line & Tie-In Lists x Utility Summaries x Basic Piping Layout & Transposition Drawings x Long Lead Equipment Identification x Emissions Effluent Summary x Rough Order of Magnitude Cost Estimate x Project Viability Assessment 	<ul style="list-style-type: none"> x Process Flow Diagrams x Overall Process Description x Mechanical Flow Diagrams x Equipment List & Data Sheets x Control Philosophy x Instrument Index & Data Sheets x Pipe Line & Tie-In Lists x Utility Summaries x Basic Piping Layout & Transposition Drawings x Long Lead Equipment Identification x Emissions Effluent Summary x Order of Magnitude Cost Estimate x Project Viability Assessment 	<ul style="list-style-type: none"> x Final Plot Plan x Equipment Specifications & Fabrication Details x Isometric Pipe Drawings x Control System Drawings x Electrical Distribution & Layout Drawings x Design & Hazop Reviews x Civil & Structural Design Drawing x Semi-Definitive Cost Estimate x Construction Support x As-Built Documentation



PROCESS SIMULATION



A critical step in the design of a chemical process is the accurate simulation thereof. Having recently been appointed as the sole Southern African agents of the state of the art simulation package VMGSim, SimPro engineers have the latest in software technology available to them. This enables us to simulate and design processes to the highest standard current technologies allow.

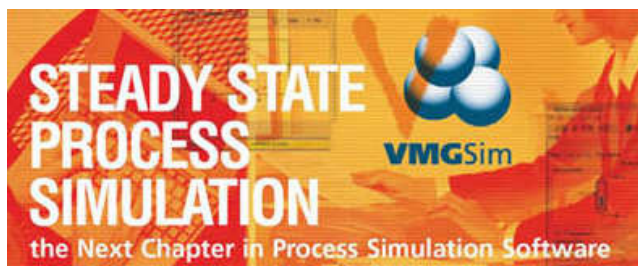
Virtual Materials Group

Virtual Materials Group (VMG, www.virtualmaterials.com) is focused on developing high quality and cost-effective software for the process industries. Their flagship products are VMGSim, the new standard in steady state process simulation, and VMGThermo, the standard physical property package system.

VMG provides proven, validated and robust thermophysical property prediction packages for the hydrocarbon, chemicals and petrochemical industries. Their thermodynamic models are backed by extensive experimental data and support provided by their technical support team.

VMGSim

The power of VMG's thermodynamic packages is available in VMGSim, an easy to use steady-state process simulator that integrates a state of the art steady state process simulation kernel, Microsoft Visio and Microsoft Excel.



VMGSim provides accurate, robust and cost effective steady state process simulation software to predict the detailed behaviour of process units and manufacturing plants. Whether designing new process units, optimizing or troubleshooting, VMGSim assists engineers to improve operating efficiency and product quality, realize objectives of reduced capital and operating costs, greater safety and increase profitability. The capabilities of VMGSim enable you to accurately model and predict the behaviour of most process units in Oil and Gas, Refining and Petrochemical industries.

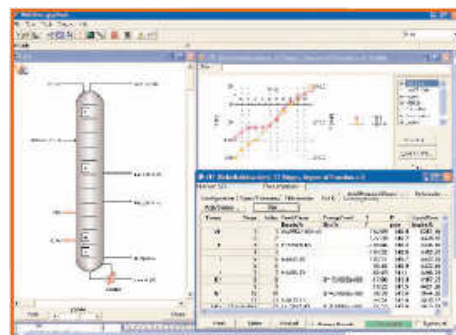
VMGSim brings new innovations that streamline development and use of simulation models:

- Incorporates the latest advancements in fully interactive simulation
- Industrial strength thermophysical property data and calculations
- Create models graphically using Visio, or with forms, scripts or web browsers
- Seamlessly embed Excel spreadsheets as unit operations or calculators in your VMGSim Model.

The Simulation Engine

VMGSim can solve even your largest models with no limits on flow sheet units, pure components or recycles. You can create process models and store these models as unit templates and then reuse them in new process models. The subflowsheet architecture of VMGSim also enables you to embed these templates called subflowsheets at any degree of nesting in the process scheme.

Advanced calculation techniques in VMGSim are ideal for successfully modelling your process. The VMGSim technique simplifies your models. Heat recycles are eliminated. There is no need to include unreal streams in the process model because



these are eliminated by the unique port-to-port connectivity, integral to the design of the flow sheet engine.

VMGSim also automatically determines any recycle loops in the model and solves without intervention. Calculations proceed as data is provided and they proceed forward or backward depending on the information supplied. Automatic determination of flow sheet degrees of freedom ensures your models are not over specified. Every piece of information you enter into VMGSim is processed immediately in a fashion similar to spreadsheet software products. As a result, models are developed and optimized quickly.

Thermophysical Properties System

VMGSim provides a comprehensive suite of critically evaluated data for over 5,500 pure components, and a mixture interaction parameter database of over 100,000 binary parameters. For oil refining models, VMGSim incorporates an extensive system for evaluating assay data and characterizing refining streams. Industry specific physiochemical properties such as hydrate formation temperature, Reid vapour pressure, Research Octane Number and Cetane Index can be calculated and monitored. Robust industrial strength thermophysical property methods and equilibrium flashes reliably converge to accurate results. Process models that require multiple thermophysical methods are easily supported.

Process Unit Operations

VMGSim includes a complete suite of process unit models for example:

- Robust, fast distillation, absorbers, extraction including complex refinery and chemical configurations
- Two and three-phase separators, mixers, balances, tees, component splitters
- Embed unit operations created in Microsoft Excel
- Pumps, compressors, expanders, valves, pipes
- Shell/Tube, LNG exchangers
- Reactor models
- Flow Sheet Model Controllers and Sets.

PROJECT MANAGEMENT



We are committed to ensuring that the project life-cycle is managed in a professional and efficient manner. This we achieve by actively fostering open relationships with your team in problem solving and resolution. In short, we place the emphasis on working with the client, as opposed to working for the client.

Enthusiastic and committed to project success, our engineers and Project Managers identify themselves fully with the client's key objectives. Our Project Management systems provide a single point

of contact to coordinate and manage all aspects of project implementation. This ensures that the delivered solution meets and wherever possible exceeds the client's expectations.

Our teamworking structure extends to all management levels and we use a set of rigorous procedures for project implementation, monitoring and review. As a result, you benefit directly from tightly controlled costs, schedule and performance. Our multi-disciplined Project Managers maintain direct control and are responsible for each stage of the project from initial design specification to the implementation of the final project. You can be assured that, at all times, project specific procedures are utilized to ensure professional and effective management.



We subscribe to the belief that in order to be successful, you need to know exactly what needs to be done, what has been done and what remains to be done.

PROJECTS COMPLETED

The following is a summary of the projects recently completed by SimPro Inc.:

Pebble Bed Modular Reactor, Fuel Pilot Plant, Pelindaba

Gas Utilities:

- General Basic Design Engineering
- Process Flow Diagram Development
- Mechanical Flow Diagram Development
- Pressure Relief Valve Design (API521, API2000)
- Instrumentation Datasheets
- Simulation
- Simpro Value – R 100 000

Steam and Condensate:

- General Basic Design Engineering
- Process Flow Diagram Development
- Mechanical Flow Diagram Development
- Pressure Relief Valve Design (API521, API2000)
- Instrumentation Datasheets
- Simulation
- HAZOP
- Simpro Value – R 900 000

Effluent Treatment Facility:

- Scribe for HAZOP
- Process Simulation of Separation Columns
- Verification of Mass Balance on Process Areas
- Simpro Value – R 150 000

Uranium Recovery Facility:

- Scribe for HAZOP
- Simpro Value – R 60 000

Total value of Project R2Bn

Hydropolishing, Sasol Secunda

- Basic Design Engineering
- Process Flow Diagram Development
- Mechanical Flow Diagram Development
- Control Philosophy
- Pressure Relief Valve Design (API521, API2000)
- Instrumentation Datasheets
- Simulation of the Process
- Simpro Value – R 150 000
- Value of Project - R140m

Dust Extraction, Unit 10, PetroSA, Mossel Bay

- Conceptual Study on the Dedusting of the Catalyst Production Plant, Unit 10
- Simpro Value – R 50 000
- Value of Project R10m

Steam Generation, Sasol Secunda

- Installation of an Emergency Shut-off Valve on the Boiler Feed Water system.
- Project Process Engineer

- Design Verification
- SIL Review
- Control Philosophy
- HAZOP
- Simpro Value – R 30 000
- Value of Project R 15m

Polyphen Production, Automa (Pty) Ltd, Isando

- Basic Design Engineering Package for a polystyrene production plant.
- Simpro Value R 250 000
- Value of Project R8m

KEY PERSONNEL

FRANCOIS SMIT

MANAGING DIRECTOR

As Managing Director, Francois' main focus is the development of SimPro into the leading process engineering company in Southern Africa. He is also a registered professional chemical engineer at ECSA specialising in conceptual, basic and detailed engineering. He serves as the main client contact for the VMGSim agency in Southern Africa.

Education

Francois completed his B. Eng (Chemical) at the Potchefstroom University in 1997.

Experience

Francois started working at Pretoria Portland Cement (PPC) as part of his bursary requirements in 1998. At first he was responsible for managing projects, which included process optimization and evaluation, mill audits and maintaining and improving the quality standards of the different products produced at PPC.

The experience gained on these projects led to his appointment as laboratory manager at PPC Port Elizabeth. Here he supervised thirteen technicians and lab assistants in the daily testing and control of qualitative samples taken at several key points in the production process. His main responsibilities included maintaining and developing the Quality Control System and ensuring the quality of the products produced by PPC Port Elizabeth.

In 2001, he decided to leave the production environment for the engineering consulting industry and joined Megchem Secunda. His main function was the conceptual, basic and detail engineering of projects for various companies. His duties included the development and update of Mechanical Flow Diagrams (MFD) and Process Flow Diagrams (PFD), compiling data sheets with respect to process data required for RFQ's, Hazop's and detail engineering, compiling of line and design tie-in lists and the engineering calculations required for the data sheets and PFD's.

He also gained a lot of experience in using steady state and dynamic simulation software, as well as heat exchanger design software. He regularly formed part of the project management team, Hazop studies, commissioning team and MFD and design review team. A detailed list of projects completed is available on request, most of which involved Sasol.

