

Complete Compatibility

The PIPEPHASE program is designed to run on PCs and UNIX workstations and to be compatible with popular Microsoft® applications such as Excel®, Access®, etc. The Microsoft Windows-based Graphical User Interface (GUI) is designed for intuitive data input, and is coupled with a Results Access System (RAS) for the graphical representation of calculation results. Users may generate input files on a PC-based GUI and export them to a UNIX server for remote execution before importing results back to the PC for review. The open nature of PIPEPHASE allows for easy import of individual device characteristics from Excel using standard spreadsheets, and the automatic export of output results to MS Access database files. Users may even run PIPEPHASE entirely from third-party applications like Excel using the PIPEPHASE COM compliant API. PIPEPHASE also accepts tabular data, e.g. VFP tables, from other simulators to shorten problem setup times.

Hardware Requirements

The PIPEPHASE program is designed to run on a PC/Windows platform or remotely on UNIX workstations with PC/Windows user interface with the following minimum requirements:

- Intel Pentium II/III or compatible CPU
- Windows 98/ME/NT4.0/2000/XP
- 128 Mb of RAM
- 70 Mb available hard disk
- SVGA Graphics Card and Monitor
- CD-ROM drive
- Compatible mouse

Upstream Optimization Suite



SIMSCI's Upstream Optimization Suite (UOS) is a set of integrated, technically superior, decision-support tools designed to provide sandface-to-surface facility asset management. UOS unites the needs of the oil and gas production industry, current software standards, and SIMSCI's technical expertise to deliver best-in-class solutions to real world problems.

PIPEPHASE® - A steady-state, multiphase, fluid flow simulator that rigorously models oil and gas gathering and transportation networks.

TACITE® - A multiphase simulator for analyzing complex transient flow phenomena in multicomponent oil and gas pipeline systems.

NETOPT® - A software tool that optimizes oil and gas production operations by the integration of a non-linear SQP algorithm with PIPEPHASE, and links to reservoir simulators for integrated full-field modeling.

Client Testimonials

"PIPEPHASE is an excellent solution for simulating oil and gas production systems. We conducted a review of several competitive systems and felt that SIMSCI provided the best overall solution for our needs."

-PEMEX

About SIMSCI

Simulation Sciences (SIMSCI) is an operating unit of the Invensys Production Management Division and a worldwide leader in advanced process control, optimization and simulation solutions for the global process industries. SIMSCI supplies commercial simulation and optimization software and related services to the petroleum, petrochemical and industrial chemical process industries, and engineering and construction firms. SIMSCI's products are designed to increase profitability by reducing capital investment costs, improving yields, and enhancing management decision-making. SIMSCI, as part of Invensys plc., maintains offices in Brazil, Venezuela, Germany, Japan, Singapore, the United Arab Emirates, the United Kingdom, and the United States and provides support and services to more than 750 customers in over 70 countries. For more information about SIMSCI, visit the SIMSCI Web site at <http://www.simsci.com>.



OIL & GAS PRODUCTION SYSTEMS MODELING AND OPTIMIZATION

PIPEPHASE®

Multiphase Flow in Networks

Quick Overview

PIPEPHASE is a simulation program that rigorously models steady-state multiphase flow in oil and gas networks and pipeline systems. PIPEPHASE has the power and flexibility to model applications ranging from the sensitivity analysis of key parameters in a single well, to a multi-year facilities planning study for an entire field.

PIPEPHASE combines a proven solution algorithm with modern production methods and software analysis techniques to create a robust and efficient oil field design and planning tool. With an extensive physical property data bank, and an intuitive Windows-based user interface, PIPEPHASE is the simulator of choice for the world's leading oil and gas producing companies.

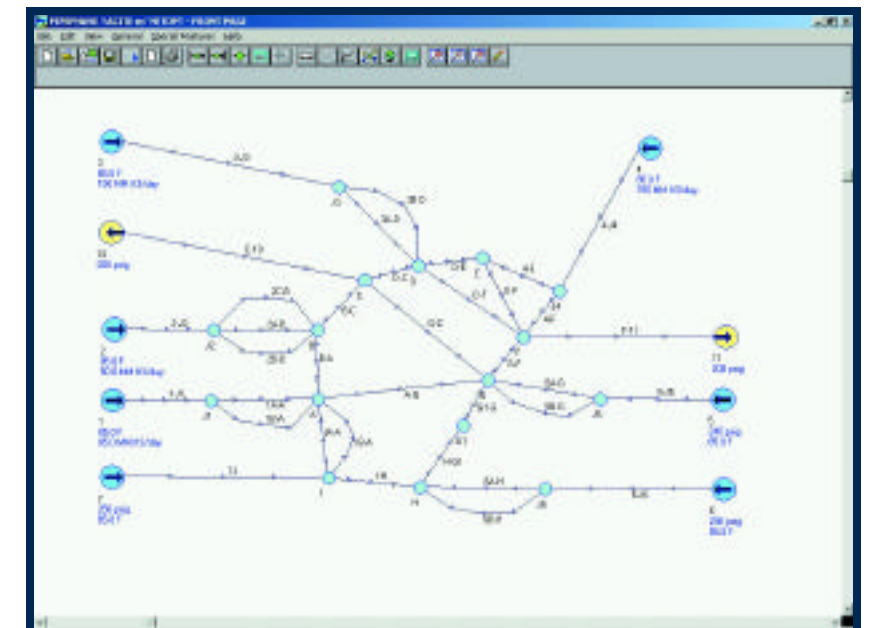
PIPEPHASE covers the complete range of fluids encountered in the petroleum industry, including single phase or black oil, as well as compositional mixtures. The program may also be applied to single-component steam or CO2 injection networks.

Benefits

- Increased overall asset-wide production
- Improved well & flow line performance
- Improved pipeline & facilities design
- Integrated field development & planning
- Reduced operating costs
- Reduced capital costs
- Increased engineering productivity

Industries Served

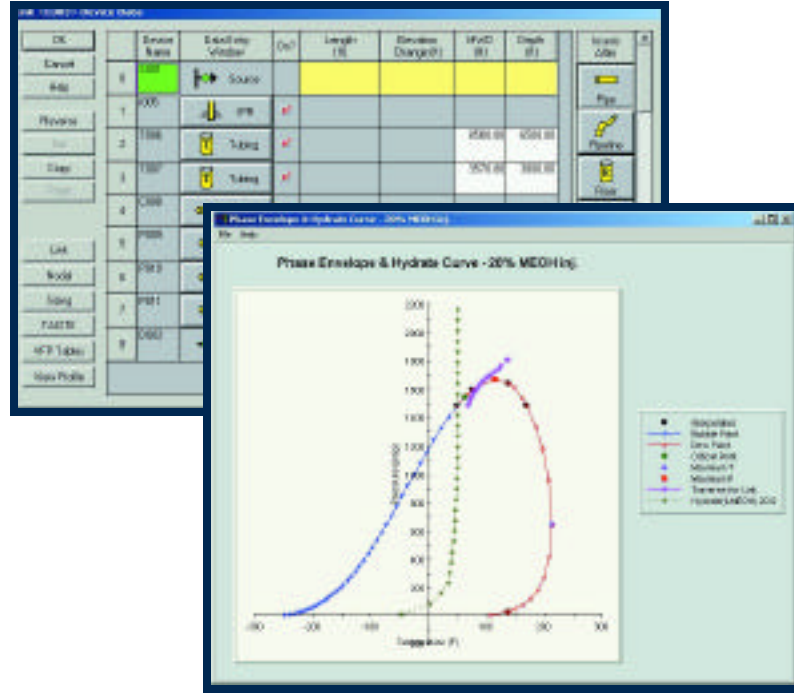
- Petroleum exploration and production
- Natural gas transmission
- Utility networks



Applications

The combination of rigorous multiphase flow analysis coupled with extensive thermodynamic property prediction capabilities makes PIPEPHASE suitable for a wide range of applications including:

- Oil and gas gathering networks
- Natural gas transmission and distribution pipelines
- Nodal analysis
- Line sizing
- Field planning and asset management studies
- Steam injection networks
- CO2 pipelines
- Gas-lift analysis
- Heat transfer analysis for heavy oil pipelines
- Hydrate prediction



Pipeline Flow Analysis

PIPEPHASE provides a comprehensive set of industry-standard empirical and mechanistic methods for analyzing multiphase flow phenomena in pipes. Coupled with extensive fluid models and a rigorous energy balance incorporating detailed heat transfer analysis capability, PIPEPHASE is a flexible tool for evaluating the complete range of fluid flow phenomena encountered in single-phase and multiphase pipelines.

Field-Wide Network Modeling

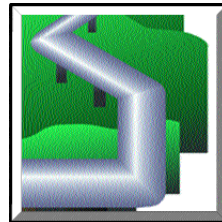
The robust, field-proven network simulation capability in PIPEPHASE enables the user to model large networks of connected wells, pipes, and associated facilities. Its detailed well bore model and extensive IPR library, combined with a complete set of surface equipment modules, allows the user to configure the necessary details of a field-wide oil and gas gathering (or injection) system, incorporating all of the interdependent components from the sandface to the downstream separation facilities.

Production Planning

The time-stepping feature in PIPEPHASE capabilities makes it a flexible field-planning tool. Reservoir depletion is simulated with decline curves while the operation of facilities can be changed over time to reflect actual field development strategy. Once a field-wide network model has been built, the planning tool is created by setting up scenarios for future facilities expansion along with reservoir decline characteristics. The completed model provides a unique look-ahead capability for the entire asset, incorporating the long-term effects of both reservoir decline and investment in new facilities.

Industry Leading Technology

PIPEPHASE has been used all over the world by pipeline designers, oil and gas production technologists, and reservoir planning engineers. The top oil and gas producing companies use PIPEPHASE as the industry standard tool, enhancing the productivity of their engineering, reducing capital and operating costs as well as increasing the production rates from their assets.



PIPEPHASE - Multiphase flow in networks

