



Hydrogen Enriched Natural Gas (HENG)

Wood's Intelligent Operations division is the largest independent provider of technical consulting services specialising in flow assurance, process simulations, metering, allocation, operations support, and optimisation.

Consultancy Studies

- Hydraulic and Energy Capacity Assessment
- Line Sizing and Equipment Sizing Studies
- System Design Rating and Debottlenecking Studies
- Gas Network Repurposing Studies
- System Integrity/Reliability Studies
- Network Stability Analysis
- Flow/Energy/Wobbe Deliverability Analysis
- Hydrogen Storage and Performance
- Dynamic Techno-Commercial Modelling
- Dew-Pointing Analysis and Design
- Independent Metering Audits
- Compressor Dynamic and Selection Studies
- Operability Studies and Operating Philosophies
- Control System Review/ Development and Control Philosophies
- Metering Modifications for H₂ Introduction
- Measurement of H₂ Concentration
- Odourisation Requirement and Assessment
- Leak Detection Specification
- Depressurisation and Purging

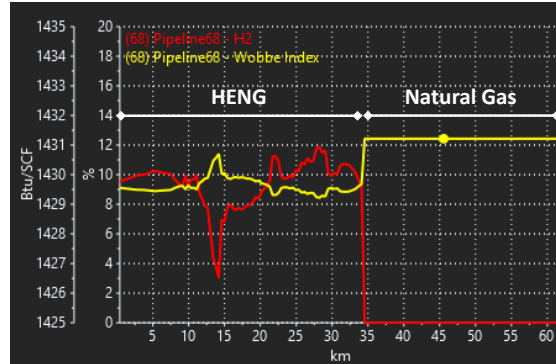


Fig 1: Plot of a Natural Gas Pipeline as HENG is Introduced

Tool Development

- Blending Management Systems (BMS)
- Pipeline Management Systems (PMS)
- Operator Training System (OTS)
- Emissions/Sustainability Reporting
- Packing and Inventory Management
- Leak Detection System (LDS)
- Gas Storage Analysis
- Equipment/Facility Maintenance Planning
- 'What-if' Scenario Planning
- Data Visualisation on H₂ Component Tracking
- Cumulative H₂ Cracking Potential



Virtuoso® is a field-proven suite of software tools with more than 20 years of successful performance in the field. Virtuoso currently monitors 10% of the world's gas supply and 30% of the world's LNG supply.

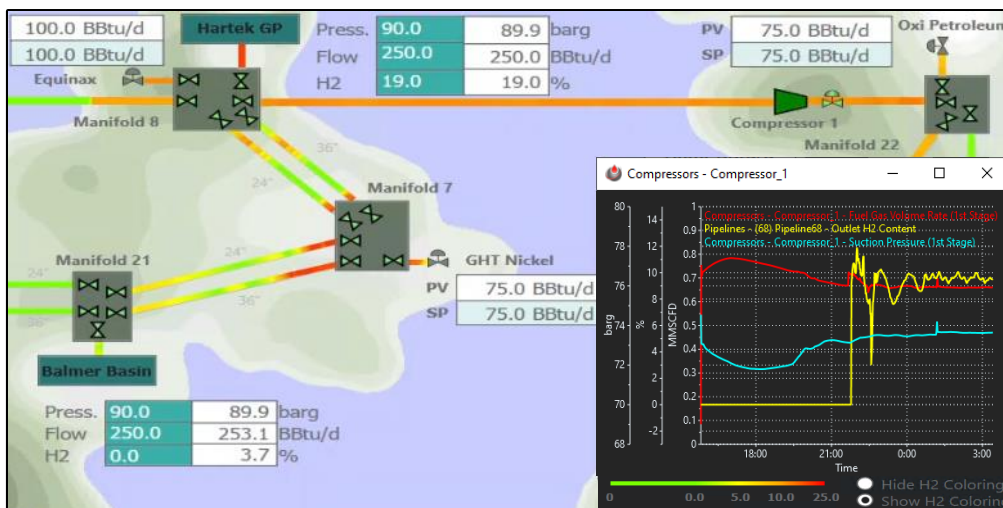


Fig 2: Virtuoso® Engineering Simulator Window for a Hydrogen Enriched Natural Gas Network



Key Topics

- Hydrogen Transport
- Hydrogen Utilisation

Asset Types

- Gas Transmission Networks
- Gas Distribution Networks
- Process Facilities

Capabilities

- Asset Performance Management
- Real-Time Performance Monitoring Visualisation
- Environmental Compliance Monitoring
- Advanced Process Control (APC)
- Systems Integration
- Pipeline Leak Detection
- Line Pack Management
- Field Instrument Analytics and Failure detection
- Virtual Flow Metering and Allocation
- Operating Philosophy/ Strategy/Guideline Development
- Advanced Thermodynamic Modelling

Why Wood?

- Proven track record in design and monitoring of conventional oil and gas assets
- Growing track record in midstream gas market
- Actively involved in hydrogen-related joint industry project (JIPs)
- Close collaboration with specialist & independent labs

Contact Us

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