

Safeguarding Operations: Implementing Advanced Safety Protocols at NSRP

Product: SIFPro (Legacy
IMS SIS)

Sector: Oil & Gas

Subsector: Downstream

THE NEED

Nghi Son Refinery & Petrochemical Limited Liability Company (NSRP) is one of the largest refinery and petrochemical projects in Vietnam, representing a substantial investment in the country's energy infrastructure. The complex is designed to process crude oil to produce a variety of petroleum products and petrochemicals. The refinery has a high capacity, processing about 200,000 barrels of crude oil per day.

With such large operations, NSRP has found it fundamental to optimize their operations wherever possible. The introduction of Cenosco's Safety Instrumented System's software played a role in NSRP achieving their operational excellence. Particularly addressing the following factors:

- Efficient SIL Calculation and Verification
- Enhanced Safety Measures and Risk Management
- User-Friendly Interface and Workflow

In this business case, we also touch on NSRP's interest in the next-generation of SIFPro - IMS SIS, our software to manage the entire Safety Instrumented System (SIS) Lifecycle loop.



THE RESULTS

NSRP implemented SIFPro, the predecessor of IMS SIS for enhancing the reliability of their Safety Instrumented Systems. SIFpro served as a centralized solution for safety integrity and risk management, streamlining safety assessments and documentation workflows within the organization.

Efficient SIL Calculation and Verification

NSRP sought to enhance safety compliance and risk reduction through streamlined Safety Integrity Level (SIL) calculations. Cenosco's SIFpro offered a user-friendly platform, enabling their Functional Safety Expert to run SIL calculation and validate the implemented safety measures implemented. This allowed them to reduce the reassessment time and ensure comprehensive safety barriers are in place. NSRP is exploring SIFPro's automation to extend testing intervals and enhance operational efficiency.

Enhanced Safety Measures and Risk Management

NSRP aimed to improve safety measures and risk management decision-making significantly through the introduction of enhanced functional safety methodology. The implementation of SIFpro offered a structured approach to safety and risk assessment, aiding informed decision-making and contributing to comprehensive risk management. It proved to be particularly beneficial for a young refinery like NSRP, setting a clear direction for future safety measures.

User-Friendly Interface and Workflow

It was important for NSRP to have a user-friendly software solution that could be quickly adopted with minimal training. SIFpro's intuitive design and simple menu made it accessible to NSRP team members, facilitating efficient tag and loop management. While features like self-paced training and an updated user documentation for IMS SIS are not present in SIFpro, the system's capacity to manage the safety loop appealed to NSRP. They are considering the potential benefits for their larger team, looking for a comprehensive safety solution from initial design to ongoing risk management, particularly interested in the next-generation of SIFPro, IMS SIS.

IMS SIS, Cenosco's comprehensive cloud-based tool supports the complete safety lifecycle management process.



Safety Instrumented Systems

IMS SIS



Use our IMS SIS software to manage the entire Safety Instrumented System (SIS) Lifecycle loop in a single tool. From design through scheduled maintenance.

- ✓ **Single software tool**
for functional safety management
- ✓ **Easier compliance demonstration**
to project auditors
- ✓ **Simplification**
of work processes/ Management of Change (MoC)

The next-generation SIFPro: IMS SIS

SIFPro is our legacy Safety Instrumented Systems software, however, you can enjoy the benefits of SIFPro, and many more with our all-new IMS SIS. Explore the features of IMS SIS below.

IMS SIS Features

Synchronized Safety Studies

Reduced project execution time for safety studies by integrating HAZOP, LOPA, and SIF design verification modules. Single point of entry for different disciplines, including tailor-made roles for each user.

Bowtie visualization

Enhance cross-team communication and simplify data management in HAZOP and LOPA studies with Bowtie methodology. Monitor barriers effectively and gain a comprehensive understanding of potential incidents through Bowtie visualization.

Guided Overhaul and Proof Testing

Digitalize overhaul and proof test work procedures, schedule overhaul and proof tests, and capture the field results within IMS SIS.

Intelligent Revision Management

Complete Revision Management across all IMS-SIS modules to support (production site) Projects and company Management of Change processes.

Comprehensive Libraries, including access to exclusive content

Access exclusive libraries from Shell, including a database of Failure Rate, Initiating Events and Barriers, and Master Equipment. Integrate other industry-specific databases, like OREDA, or create your own database.

Cenosco and the IMS Suite

INTEGRITY MANAGEMENT SYSTEMS

Cenosco is the leading provider of asset integrity management software.

For over 20 years, we have been leading the way in product innovation across asset-heavy industries, including Oil and Gas, and chemical manufacturing. Our IMS Suite of solutions was designed to support users in making smart inspection and maintenance decisions to increase safety, maximize asset availability, and optimize asset management costs.

Meet IMS

IMS is a unified asset integrity management solution suite for all your equipment types and processes. The range of IMS products can be deployed individually or together, and each component complements the others seamlessly.



IMS PEI

Pressure Equipment Integrity

Manage equipment integrity using RBI methodology and advanced corrosion calculations.



IMS RCM

Reliability Centered Maintenance

Optimize preventive maintenance plans based on risk and take advantage of our library of maintenance strategy templates.



IMS SIS

Safety Instrumented Systems

The perfect solution for your end-to-end Safety Life Cycle analysis.



IMS FCM

Flange Connection Management

Manage critical flanges with a strict guided maintenance protocol.



IMS PLSS

Pipeline and Subsea Systems

Manage pipeline and subsea system integrity, performing In-Line Inspections (ILI) and Fit-For Service (FFS) calculations.



IMS CIVIL

Manage Civil Structures

Manage equipment integrity with RCM and RBI methods adapted for civil degradation dynamics.

Why IMS?

The IMS Suite of solutions was designed to support users in making smart inspection and maintenance decisions to increase safety, maximize asset availability, and optimize asset management costs. Our domain expertise goes deep into the assets, and with our fully integrated software, you can centralize your maintenance and inspection efforts.

- ✓ Keep your people safe
- ✓ Gain control over your assets
- ✓ Manage your assets with ease
- ✓ Comply with regulations
- ✓ Avoid leaks and other disasters
- ✓ Exclusive Methodologies and Libraries

OUR SOLUTIONS ARE USED GLOBALLY

We're deployed in over 40 countries across the globe.

11,000+

ACTIVE
USERS

200+

DEPLOYED
ASSETS

20+

YEARS OF EXPERIENCE

Proven Results

- ✓ 20% Inspection cost reduction
- ✓ 30% Turnaround time reduction
- ✓ €100K - € 100M Savings per leak prevented

Trusted by world leaders

