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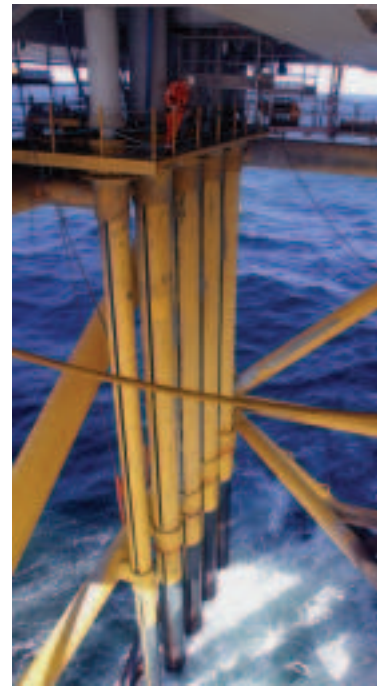
Sesam Structure Integrity

Manage and track the condition of your asset during its life cycle

DNV Software

Safe operations

Optimal management of your assets reduces unplanned shutdowns



The risk of doing business

The oil and gas industry today is experiencing increased focus on how assets are managed. The demand is driven by increased focus on safe operation, risk and environmental issues. A single accident can be catastrophic to the business, resulting in loss of life, property and public reputation.

Fitness for purpose

A major challenge in today's offshore operations is to ensure your assets' fitness for purpose, with optimal efficiency and in compliance with company policies and regulatory requirements. Growing concerns about safety and risk exposure have put focus on management of data compiled during the life cycle.

Historic data is of great importance as assets move into and beyond original life expectancy, and quality data storage is essential. Complete track of asset modifications, like work-process changes, pay-load updates, structural reinforcements or repairs is vital in order to ensure safe operations.

Assessment of integrity status

It is inherently difficult to interpret integrity status of a complete installation from inspection findings. Often, the integrity manager faces a large amount of disparate data from ad-hoc reports, which further complicates the

task. Once the integrity status of one asset is determined, sharing knowledge to gain efficiency in the assessment of integrity is difficult to achieve. These issues must be faced to ensure that management focuses on the real safety and integrity threats to operations.

Our approach to providing asset integrity management

DNV Software provides state-of-the-art software to support asset integrity management. Our approach is to combine in-depth DNV engineering knowledge with software engineering. This unique combination of skills is expressed in the Sesam Structure Integrity solution.

With Sesam Structure Integrity our clients are able to collect and organise information about their assets, particularly the knowledge of asset integrity status. Knowing the integrity of your assets is a prerequisite for safe and secure operations.

By using our solutions to support all aspects related to structure integrity management, you will over time amass structured information that serves both decision support and knowledge sharing needs.

Knowledge sharing

The work-flow technology employed enables companies to integrate standardised work-processes supporting how to work, and thereby effectively manage people, applica-

Provide transparency

Communicate information to all stakeholders worldwide



tions, and information. The results are improved productivity, quality and safety, lower production costs, and enhanced competitiveness.

Integrity management

Consistent reporting, interpretation and aggregation of asset integrity data throughout the organisation and beyond provide powerful management decision support.

Our solutions secure decision support through colour coded integrity status, transparent work-processes, data quality checks and access to asset data and trending analysis.

Best engineering practice

Ready-made templates are set up for best engineering practice processes, models of a whole range of offshore asset types and rules for how to set overall integrity status based on inspection findings.

“The benefits of a single integrated system for managing the integrity of offshore structures over time are enormous. DNV Software has done an excellent job adapting the Sesam Structure Integrity to our structure integrity management needs. The resulting safety and productivity gains are already apparent, and well worth the effort and resources invested”

Michael Hall, Principal Engineer, ConocoPhillips

Lifecycle management

Our solutions cater for the complex tracking requirements that arise because of operational history and modifications. Operational history may affect future operational limits, and detailed risk-based analyses may become relevant to ensure safe and cost-efficient operation.

Keep focus on asset integrity issues

Focusing on the right asset integrity issues is challenging. To this end, our solutions employ colour-coded status throughout. Status is given for severity of anomalies, delays in planned progress and asset integrity. With critical issues highlighted, appropriate management action can be taken.

Safety management through correct information

Taking the right asset integrity decisions depends on having access to correct information about the assets and consistent anomaly and mitigation reporting. Implementing the Sesam Structure Integrity will greatly reduce the chance of unplanned shutdowns and increase safety, as quality information about asset integrity enables management to take corrective actions at the right time.

Solutions for the offshore market

The Sesam Structure Integrity is a configurable and scalable software solution for managing integrity and enhancing performance of offshore structures. It enables

Life cycle management

By keeping track of history as well as the current situation



operators to improve overall control of their assets by providing functionality for planning and executing inspection campaigns, view work progress and asset condition status, and provide insight to history as well as access to all pertinent documentation.

Sesam Structure Integrity facilitates the management of structural asset data, inspections, anomalies, documents, analyses, condition and integrity. The common offshore asset types covered are fixed structures, floaters offshore flow systems (risers and pipelines). It supports a wide range of structural parts. Process support provided for integrity management comprise planning, execution and evaluation of inspection and maintenance activities.

Effective resource and investment allocation

Storage of relevant data such as asset attributes, documents, analyses, inspections and anomalies enables the operator to focus on the right resource and investment allocation as well as improving budgeting on repairs and necessary studies to ensure continued fitness for purpose.

Sesam Structure Integrity provides a structured way of sharing knowledge and safeguarding knowledge over time. The user-friendly and intuitive graphical user interface promotes increased quality as it empowers consistent input and management through minimum training efforts.

Transparency

The best way to meet the challenges with respect to information sharing and collaboration is to adopt a common integrated asset information model that captures all the relevant data during the design, construction and operation phase vital to owners and operators of offshore installations. By applying an asset integrity management solution that is supported by one common application, accessible throughout the world, the transparency of information is ensured throughout the organisation or beyond.

Structure integrity management

Sesam Structure Integrity offers a repository containing a hierarchical breakdown of the asset to a level suitable for inspection purposes with inspections connected to the various applicable objects within the asset structural hierarchy. A 3D view model provides a strong visual support of the asset model in addition to the hierarchical breakdown of the asset. The 3D model eases navigation and drill-down. It also provides highlighting of critical issues and colour-coding of anomalies.

Brix – a common, robust platform

All solutions from DNV Software are built on our Brix Foundation, encompassing a common explorer which acts as an integration platform, common work-flow modeller and project management. The Brix Foundation is

Focus on the real integrity issues

Colour-coded integrity status in real-time keeps you alert



highly configurable, scalable and easy to integrate with existing software. Brix Foundation is based on a service-oriented architecture, enabling third party applications to interact with the Brix API through Web Services (SOAP) or .NET.

Integration

DNV Software has extensive experience in integrating with third party software of different types, such as CAD, GIS, ERP and document management systems.

Scalability

The solutions provided by DNV can be easily scaled from one asset to multiple assets, from one type of assets to several types of assets.

The software can be implemented on existing assets by configuring the solution to match the existing history, or on new assets with no previous history, thus setting up a system enabling the asset(s) to be monitored and documented in an appropriate manner and easily re-evaluated in case of a modification or damage.

DNV Software solutions are deployed in widely differing environments, from single-user to enterprise-wide deployments with more than 2000 users.

Standard Deliverables

The Sesam Structure Integrity can be delivered as a standard solution with a standard functional breakdown of the asset according to ISO 15926.

Customisation

Depending on customer needs, DNV Software can also provide tailored versions of the Sesam Structure Integrity solution to support the specific work processes and rules required by a client. Therefore, our deliveries vary from standard implementations where the clients accept our best-practice templates without alterations, to implementations with many customer-specific configuration settings and integration services. The time-frame for an implementation depends heavily on your requirements for configuration and integration.

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