Pipeline Integrity Management Services

The Structured Approach to Asset Management™

The PIMS of London team founded their reputation in Pipeline Integrity Management, our consultants and key customers pioneered modern Pipeline Integrity practice. Today PIMS has evolved these practices - we apply Management Processes, Continuous Improvement Methodologies and Operating Reliability Systems to define what we have termed as The Structured Approach to Asset Management™. Our game-changing services enable you to configure, apply and operate an effective and efficient Pipeline Integrity Management System.

We summarise our Pipeline Integrity Management Services as four Integrity Management Programme Components, described below; we complement these with Programme Support Elements described on the back cover of this brochure.

**Strategic Planning**
By helping oil & gas leaders to make their businesses better, we identified the Strategic Planning elements that you require to configure & apply the best-in-class Pipeline Integrity Management System. These elements are driven by your defined set of Pipeline Goals & Objectives.

Our approach empowers you to demonstrate the effectiveness of your configured Pipeline Integrity Management System and implement continuous improvement in Pipeline performance. By following this approach, you develop a stronger Pipeline Division - focused upon a common business strategy.

**Risk & Integrity Response**
We developed elements to identify and quantify all of the obstacles to your Pipeline Goals & Objectives, then express the degree of this risk and develop the most robust Response Strategy that overcomes these obstacles. These elements can be applied in a prescriptive manner, supporting continuous improvement towards a risk-based methodology, or as a data-enabled risk-based programme from the outset.

Fully consistent with both ASME B31.8S and API Standard 1160, set within the context of our Structured Approach to Asset Management™, these elements ensure that your responses are effective, compliant and fully aligned with your business strategy.

**Repair & Rehabilitation**
It is important for you to maximise the return on the investments you have made to develop integrity management plans, programmes and initiatives; Effective, tracked execution ensures such a return. We offer a series of pipeline Repair & Rehabilitation elements that support you with the identification and integration of workflow, the supervision of task completion and the review of incremental progress toward your Pipeline Goals and Objectives.

These services demonstrate our commitment to the rhythm of a continuous improvement cycle and reflect our desire to implant this rhythm into your Pipeline Division with effective results - ensuring that your Pipeline expenditure is properly targeted with a maximum, measurable impact towards your Pipeline Goals and Objectives.

**Integrity Evaluation**
With a proven heritage in Pipeline Inspection and Integrity Evaluation, our engineers and consultants confidently deploy the appropriate skills, technologies and codes to execute and evaluate an inspection campaign properly within context of your Pipeline Integrity Management System. Our Integrity Evaluation elements minimise the expense and disruption associated with pipeline inspection - we identify locations and select technology on a segment-by-segment basis, following proper risk consideration; we also make sure that the information obtained is exploited to the full. By mapping the full picture of pipeline susceptibility, we distribute and utilise results in a manner that could radically reduce your future inspection liability.

The elements that comprise these four Integrity Management Programme Components are described overleaf.
The Pipeline Integrity Management Programme Service Elements

PipeLine Goals & Objective

To enable you to manage the expectations of your stakeholders & address over-intended time and cost improvement, we work with you to define Pipeline Goals and Objectives. These include the Pipeline Performance Indicators to form a scale with which you can measure the impact of each tactic. To achieve this, we establish your defined Pipeline Goals & Objectives.

PipeLine Performance Evaluation

As a baseline, we benchmark the efficiency and effectiveness of your operation prior to the implementation of your Pipeline Integrity Management Programme. We then track incremental progress in your performance and measure the return on your investment, against a scale established by your defined Pipeline Goals & Objectives.

PipeLine Analysis & Evaluation

We support you to enable your Pipeline Goals & Objectives, by asserting the fixed world-class talent, best-practice processes and leading-edge technology. Our industry position enables us to select and procure the most appropriate external resources to complement our in-house team — we can even integrate your own staff into our team throughout the Programme, ensuring that they sustain your path to continual improvement after our participation is complete. We have proven capability in every element of the complete Integrity Management Programme — call us if you have a Programme task that is incremental to the capabilities of your Pipeline Division. From procurement through to final handover, we execute the works and supervise task completion with a continual focus on the progress toward your Pipeline Goals and Objectives.

PipeLine Repair & Rehabilitation Execution

We support you to enable your Pipeline Goals & Objectives, by asserting the fixed world-class talent, best-practice processes and leading-edge technology. Our industry position enables us to select and procure the most appropriate external resources to complement our in-house team — we can even integrate your own staff into our team throughout the Programme, ensuring that they sustain your path to continual improvement after our participation is complete. We have proven capability in every element of the complete Integrity Management Programme — call us if you have a Programme task that is incremental to the capabilities of your Pipeline Division. From procurement through to final handover, we execute the works and supervise task completion with a continual focus on the progress toward your Pipeline Goals and Objectives.

PipeLine Repair & Rehabilitation Planning

Integration is key to the success of your Pipeline Integrity Management System. We integrate FFP outputs with your other routine, scheduled activities to maximize the impact of your Pipeline Integrity Management System. We ensure that your plans reflect a well-defined pipeline repair and rehabilitation strategy, that we can formulate for you. When implementing progressive integrated strategies, the pipeline management process drives your program forward, and a disciplined & structured approach is therefore critical. This is the approach that PIMS applies, as an integrity management company focused on the achievement of your Pipeline Goals & Objectives.

PipeLine Fitness for Purpose (FFP) Evaluations

We perform Post Inspection Evaluation works upon ILI data to demonstrate whether your pipeline is fit-for-purpose. Should your pipeline fall short of a fit-for-purpose condition, we identify the corrective actions required to restore condition. Additionally, we schedule the future repair & remediation strategies, re-inspection programmes and other actions required to sustain your pipeline’s fitness. We are proud of the breadth and depth of engineering disciplines that we apply when validating your pipeline against its appropriate and intended standard — we can even integrate this appropriately and intended function as a Pipeline Feature into your Integrity Management System. This gives you the means to accurately and consistently measure pipeline performance across your network.

PipeLine In-line Inspection (ILI)

We can manage your in-line inspection programme as a turn-key execution service, following-on from an IMP that we have developed, or as a standalone service. Key team members, in PMG, have countless man-years experience in managing ILI campaigns with the full spectrum of ILI fleet: geometry, metal loss and crack detection runs using mechanical, magnetic & ultrasonic tools, either standalone or in parallel with integrity management tools (IMS). We have a proven pedigree and an established network throughout both the traditional and contemporary ILI industry — our experience in ILI is underlined when we supply specialist data analysts to accurately characterise unusual features and anomalies. Coupé this experience with our unique ability to frame your inspection programme within the context of a Pipeline Integrity Management System and you will understand why PIMS is the intelligent choice for outsourced ILI management.

PipeLine Segment & Susceptibility

Using our own software, or in conjunction with established risk assessment modules, we segment your Pipeline’s assets by ascertaining and overlapping segments according to common properties & characteristics, including relevant threats & consequence classes, we can generate comparable regions across your pipeline network. This work establishes the process for design and the technology to conduct your Pipeline Goals & Objectives, where and when. We then identify the pertinent information that is required to validate these susceptibility psychologies and property quantify the probability of failure due to these threats.

PipeLine Risk Assessment

To safeguard the performance of your Pipelines, you need the clarity to see which actions will have the greatest impact in meeting your defined Pipeline Goals & Objectives. We work with you to make sure that clear and consistent criteria are used to determine which actions should be taken to meet your Pipeline Goals & Objectives.

PipeLine Integrity Management Plans (IMP’s)

We use Risk Assessment Outputs within the context of your Pipeline Goals & Objectives, to support the selection & scheduling of appropriate response actions in an Integrity Management Plan (IMP).

PipeLine Direct Assessment (DA)

Once the factors that may impact on your Pipeline Goals & Objectives have been identified, we gather the data to quantify the odds. We organise all the available information, enabling us to determine threat susceptibility, probability of failure and the consequence of failure at any given location. We are comfortable to digitise external information and integrate electronic data sources. We review each data element to ensure that it is valid; we then apply our alignment tools to ensure data sets have a common lineage. We will then organise this information for you, arranging uploading templates for subsequent risk assessment works, setting data mining, prioritising your tasks, updating project storage & collaborative access arrangements. This gives you a powerful PIMS Direct Assessment (DA) tool that enables you to maintain and sustain the value of your information over the lifetime of your pipeline.

PipeLine Integrity Management Programme Service Elements

The Structured Approach to Asset Management™

© PIMS of London 2010

© PIMS of London 2010
The four components of Integrity Management and their constituent elements are complemented by our Programme Support Elements. These enable you to successfully apply and sustain a Pipeline Integrity Management System, in the spirit of Continuous Improvement, and:

- Develop the vision to anticipate and manage change
- Provide direction with clear performance objectives
- Commit to the quality improvements that your PIMS will deliver
- Manage the interfaces that allow information to flow across Divisions
- Develop your personnel and build a vibrant skills mix
- Make the appropriate provision to deal with emergencies
- Build a dependable repository of effective Procedures
- Exploit and sustain the full value from your Pipeline Data

These Programme Support Elements collectively form three Components:

Management Systems
Management System elements optimise the effectiveness of your Integrity Management Plan (IMP), making it more effective. Transparent and accessible Performance Plans are developed for your Pipeline Division; the expectations of your Stakeholders are managed by effective Communications Plan and a compliant Quality Plan ensures that your progress is demonstrable with a clear audit path.

These Programme Support elements comply to B31.8S, as does our pre-evaluation work, undertaken to smoothly facilitate the management of change. Moreover, as your Pipeline Division team members and stakeholders are key to successful programme implementation, we identify and execute Change Management Plans with you. These ensure that you are operating in an environment that embraces, the introduction of a new Management System.

Operational Effectiveness
Your Operational Effectiveness governs the sustainability of your Pipeline Integrity Management System (PIMS). We ensure that your Pipeline Division has the Organisational Effectiveness to facilitate sustainable, continuous pipeline integrity improvement. Additionally, we develop the Training & Competency programmes that equip your team with the skills to sustain the applied PIMS. We then support you with compliance tools - our Procedures Development element ensures that you are properly resourced for consistent and compliant PIMS implementation. To complement this, we provide Emergency Response Planning to ensure that your last line of defence is in place to contain the consequence of pipeline failure in a prepared, rehearsed and compliant manner.

Data Management
PIMS offer integrated, collaborative Data Management services that enable you to access and maintain information - liberating data to support informed choices regarding the Performance of your Pipelines.

Effective data management is central to the efficient implementation of your Pipeline Integrity Management System. We develop PIMS Databases that facilitate tools to provide:

- Alignment of Data, along a common linear reference
- Dynamic Segmentation of your Pipeline
- Validated templates for Risk Assessment works
- Probabilistic Risk Modelling, with appropriate algorithms
- Collaborative workflow management with tracking of progress
- Progressive, structured Susceptibility & Integrity Evaluations
- Performance Evaluation dashboards and report generators

Our Integrity-led approach, supported by our Business Management experience, enables us to correctly position Data Management within your Pipeline Integrity Management System. We insert those collaborative tools that improve compliance to process and eliminate redundancy in your Corporate Systems.

We apply the disciplined approach of New Technology Introduction (NTI). Applying our Structured Approach, we establish a robust business case to navigate the tollgates of detailed specification, design, build, test, launch and in-service validation. Our NTI missions are executed with clarity of vision, and of purpose, that ensures the completed deliverable meets your goals.