

Intergraph Smart® Completions

Preservation



Preservation: The protection and preventative maintenance carried out on equipment prior to normal use

As many projects across the globe are being put on hold, the challenge is to ensure that assets and equipment are being adequately preserved as per the Original Equipment Manufacturer (OEM) specifications, to ensure the integrity of the equipment and to maintain the warranty. This equipment can often sit at the site for months while the arduous process of construction completion creeps along. Equipment can also arrive on site months before installation and normal operation and needs to be preserved on a regular basis to follow equipment OEM, regional and seasonal requirements, and modified as conditions change. Failure to do so will render OEM warranty invalid.

Preservation is made up of clearly defined routines, schedules and tasks that maintain equipment in working order. These preservation tasks are performed during the construction phase while equipment is waiting to be installed and continues into the commissioning phase prior to normal operation. For plant operations and maintenance turnarounds, preservation tasks are typically executed on a schedule while the plant is in operation or in the middle of a shutdown; this ensures all equipment is operating at its maximum. Unutilized and idle equipment, laying around the site without routine maintenance, is a depreciating asset due to corrosion, moisture, dust and many other factors that compromise the integrity of the assets functionality and yields to additional cost or replacement during pre-commissioning testing.

Preservation Challenges

Equipment and materials arriving on site are constantly being moved, and keeping track of where everything is can be a challenge. Maintaining the preservation schedule can also be very challenging, especially on multiple sites and across multiple phases of the project lifecycle. Poor preservation management and improper preservation routines will lead to equipment failure, repair costs and delays. This is further exasperated by a lack of planning, organization and software.



Intergraph Smart® Completions and Preservation

Intergraph Smart® Completions is a powerful solution enabling companies to define their preservation strategies, apply a recurring schedule and track completion and compliance on a day-to-day basis. All preservation functions are tracked from shipment, storage and installation through startup and operation. Issues are logged as non-compliance reports and supported with critical data and images. A system that can track compliance against preservation requirements not only mitigates corroded equipment, it provides a historical log with detailed reports proving preservation activities were performed as required and any issue was addressed in a timely manner to eliminate the void of warranties, as well as unforeseen disruption to installation and eventual operation.

The Smart Completions Asset Preservation Plan Manager is designed to assign, schedule and track “preservation plans”. A preservation plan is a collection of preservation tasks to be performed on a piece of equipment either during its shipment and/or storage onsite prior to its installation. The intent is to ensure equipment warranties are being met and are not voided. The preservation module provides traceability and provides reporting on who and when each preservation task was performed.

A preservation plan is comprised of a collection of preservation tasks. Each task has a collection of preservation steps/actions, start/end dates, frequency and assignment to specific companies and workgroups. When a user executes a preservation task, they are executing an “instance” of the preservation task. During the execution of the task, the user will identify if there are any items that are not compliant with the preservation task requirements. In this case non-compliance issue is created and immediately routed to appointed personnel so that they can take action.

A preservation task is best created as a task model for a particular asset type as recommended by the equipment vendor. You can create a preservation task model identifying the steps, tools, materials and frequency of the task and assign the task module(s) to the equipment. You would assign the task model(s) to equipment. It is common that the equipment vendor will require two different preservation tasks, one designed to preserve the equipment during shipment and the other to maintain its integrity during storage. In this case, the two tasks would be staggered. The shipment preservation task would have a start and end date, whereas the storage start date would be the end date of the shipping preservation task.



A Preservation Task

The different forms for each discipline, defines and records the preservation requirements and activities.

Combine preservation steps with a powerful mobility solution, to capture digital pictures, have all OEM documentation and drawings accessible on site, set reoccurrence check schedules, track noncompliance and digital assignment of responsible party. Easily end tasks when the preservation process is complete directly on a mobile device for real-time preservation management. Such functionality adds not only productivity but project governance accountability to asset preservation efforts, including traffic lights for any past due activity.

Reports are generated on-demand to show the progress of preservation activities and can be included in final Turnover documentation. This is how management gains greater insight into what's happening in the field as all of the information is at their fingertips, available in real-time.

The benefits of implementing proper preservation procedures are clear: By strengthening operational and safety performance, operators and contractors can minimize downtime and maximize productivity.

Protecting Your Start-up Schedule

By adopting the robust digital management preservation module within Smart Completions for the lifecycle of the project, from fabrication through to commissioning, it is possible to reduce downtime and, in turn, loss of normal production. This can help contractors and operators be more confident that they have fully protected their assets and equipment.



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Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

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