

Pipeline Data Management System Implementation

An aerial photograph showing a long, straight pipeline under construction in a vast, flat, arid landscape. The pipeline consists of a series of dark, cylindrical sections laid out in a straight line across a wide, sandy path. The surrounding terrain is covered with sparse, low-lying vegetation. In the distance, a small white structure is visible on the right side of the path. The sky is clear and blue.

Business Profile

- Techint E&C has completed more than 3,500 projects throughout its history. Based on this experience, it provides added value to its customers and partners, identifying and enhancing competitive advantages, building a differential with the people, processes and systems it has.
- Within the framework of its performance, the company acknowledges its responsibilities regarding environmental preservation and sustainable development. Techint E&C commits to its employees, customers, contractors and the community to minimize the environmental and social impact of its operations. This commitment is reflected in its Mission, Vision and Values, and is materialized in its Management Policy.
- By implementing and monitoring these policies, Techint E&C demonstrates its comprehensive approach to sustainability, setting high standards. Its constant commitment to excellence and environmental and social responsibility allows it to remain a benchmark in the market, benefiting both its employees and the environment in which it operates.



Quebrada Blanca Project Phase II (Tarapacá, Chile)

This project included the construction of a working platform and the assembly of two main pipes. The aqueduct, with a length of 168 km, consists of a 36" pipe, while the mining pipeline has a length of 164 km and is composed of 6" and 8" pipes.



Los Bronces IV Project (Región Metropolitana Chile)

The project included the replacement of 31 kilometers of pipelines. These pipelines correspond to the Pulp Transportation, Reclaimed Water Transport and Tailings Transport systems.



Laguna Seca Project (Antofagasta, Chile)

The objective of the project was to ensure the operational continuity of the tailings deposit, covering the three main work packages: wall, water recirculation and tailings distribution line.



Quellaveco Project (Moquegua, Perú)

The project included the construction of a work platform for the assembly of the freshwater pipe and pumping stations. The aqueduct, with a total length of 87 km. In addition, the scope of the project included the construction of additional stations.



Presidente Néstor Kirchner Project (Argentina)

The "Presidente Néstor Kirchner" pipeline was constructed to significantly bolster the gas transportation capacity in Argentina. This pipeline's trace is 573 kilometers long and joins the Neuquén and Buenos Aires provinces with a 36" tube.



Duplicar Oldelval Project (Argentina)

This project is an expansion of pumping and transportation capacities of "Vaca Muerta" oil deposit. The oleoduct, has a length of 276km, connecting the "Pichi Mahuida" Pumping Station (Río Negro province) to "Puerto Rosales" Terminal Station (Buenos Aires province)."

Findings

- 1. Improved quality and operational excellence:** Quality Management System is difficult to implement in projects that have a big staff turnover, and short execution periods. It requires hundreds of hours of training, extra-staff to manage this trainings, and time just to let new people develop under our Integrated Management System, that includes Quality Management.
- 2. Cost savings:** The velocity and efficiency that we manage to learn and execute in our projects, in terms of folder preparation and posterior delivery to our stakeholders, give us the benefit of time saving, that fall into a cost saving.
- 3. Environmental responsibility:** The growing recognition of the negative impacts of energy consumption on the environment has led to an increase in environmental awareness. The implementation of this tool helps to minimize the negative effects on the environment, reducing the carbon footprint.

Solutions:

To achieve a significant improvement in quality and construction performance, Techint E&C has implemented Pipetrak as a tool for Pipeline Data Management System, in 'Collahusi Project' (Chile) and 'Duplicar Oldelval Project' (Argentina). This required a plan with several essential steps and considerations:

1. Different work approaches were analyzed and implemented to manage traceability at all stages of the projects, efficiently.
2. New training of Pipetrak's software allow us to achieve big projects in short execution periods, both in Argentina and Chile.
3. A thorough analysis was carried out and periodic monitoring and evaluation systems were selected to comply with the goals and to make the necessary adjustments, in order to ensure continuous improvement.

Implementation

Pipeline Projects



10 Rules for Quality Performance



Record's execution in field



Analysis of time and cost savings



Training and Awareness Campaigns

Achievements

As a result of the implementation of Pipetrak, the time of preparation and release of folders has been reduced by 100%.

We manage to transform from this:



Hundreds of folders of documentation



To this:

Weld Log Report

Section : 56 Inch | Spread : Spread-1 | KP Post : KP0001 | Weld No. : KP0001JFT004RP1

Activity Name | Report No | Report Date | Result | Upstream | Downstream

Activity Name	Report No	Report Date	Result	Upstream	Downstream
Tie-In	054-10051	21 Aug 2016	Accepted	BA0007588-15410439	BA0010013-15413699
AUT	132-1C0168A	25 Aug 2016	Not Accept		
Clearing & Grading	045-10334	1 Dec 2016			

AUT INSPECTION REPORT

Report No: 132-1C0168A

Inspector: [Signature]

Date: 25 Aug 2016

Location: [Details]

Defects: [List of defects]

Remarks: [Notes]

Signature: [Inspector Signature]

Date: [Date]

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Long term planning

- In order to raise awareness among our organization, all measures implemented in pipeline projects were communicated globally as "Good Practices"/"Lessons Learned". They refer to a series of measures successfully implemented, covering different areas such as social, environmental, economic, quality, construction, among others.
- It is important to recognize the positive impact of these exemplary practices. Therefore, they were registered in the Document Base of the organization through Knowledge Management System.
- This initiative not only highlights the efficiency of these facilities, but also their ability to ensure long-term sustainability. In this way, its value is maximized, and an intelligent management of resources is promoted, thus boosting profitability and the success of future works.
- For new pipeline projects such as the 'Codelco' - Chile, and 'Reversión Gasoducto Norte' – Argentina, Gas Pipelines, the goal is to achieve a 100% use of this software to all phases of construction.

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