



# INNOVATIONS AND IMPORTANCE OF INSTRUMENTATION FOR CONTROL AND REAL TIME MONITORING OF STEAM INJECTION OPERATIONS

## AUTOMATION, MONITORING AND CONTROL

There are currently great technological innovations in the Instrumentation branch to carry out monitoring and control of steam injection operations; which have been perfected over time. Important innovations in instrumentation and automation have been incorporated in steam injection systems in order to optimize and facilitate the management of steam injection process operations, improve steam quality; as well as optimize resources, reduce environmental impact, ensure the physical integrity of equipment and automate the control of all system variables and parameters.



## IMPORTANCE OF MONITORING AND CONTROL IN STEAM INJECTION OPERATIONS

Instrumentation is of vital importance in the monitoring and control of steam injection operations, because it comprises a set of equipment, devices and tools that are used to execute with great accuracy and precision the measurement, conversion, transmission, recording and evaluation of the different variables necessary to start, develop and control all the stages of the process; in order to get the best possible results in system operations.

Through the instrumentation the monitoring and control of the different process parameters is carried out and the values or signals of these parameters are carried and integrated into a Programmable Logic Controller (PLC) to ensure the operation, quality and efficiency of the system. The processing of this data offers the following advantages:

- Increased accuracy in steam injection system control.
- Development of production schemes and study of production growth opportunities.
- Sensitivities and predictions of system behavior (simulations).
- Check the efficiency of the system and the behavior of the different parameters.
- Sensitivities of steam injection rates.
- Statistics on water, fuel, chemical and other consumables.

