❯ VARIABLES TO BE CONSIDERED FOR THE SELECTION OF THE ARTIFICIAL LIFT METHOD IN STEAM INJECTION PROCESSES

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All the stages involved in a Steam Injection Process are important, because its success depends on its correct execution. These stages are:
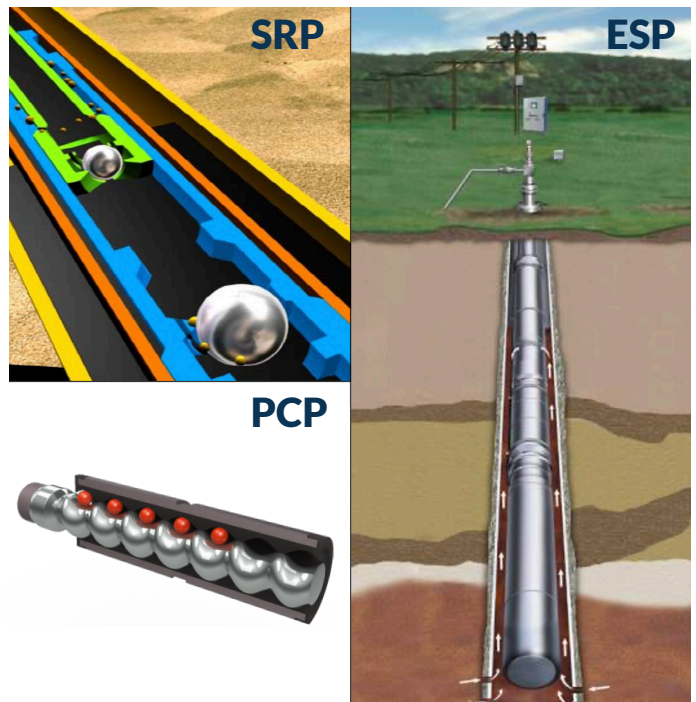
1. Well completion with injection equipment (Surface / Downhole).

2. Steam Injection.

3. Soaking Time.

4. Well completion with Artificial Lift Equipment.

5. Hot Production Stage.

POST INJECTION PHASE:

This article briefly describes the importance of the well completion with pumping equipment and hot production stages; which basically depend on the Artificial Lift method applied and the optimization of the operating parameters. In general terms, the appropriate selection of pumping equipment for the oil extraction in the post-injection stage is based on the numerical simulation of different production scenarios, which depend on the following variables:

- N° of Steam Injection Cycles applied (Historical).
- Oil Production Capacity (Potential).
- % of Oil Production Declination.
- Type of Reservoirs (Consolidated and Unconsolidated sands).
- % WyS, °API, GOR, Sand content.
- Surface Facilities (Electricity supply, surface line network, storage capacity).
- Statistics of application in oil fields and reservoirs subjected to Steam Injection.
- CAPEX y OPEX (Feasibility Projection).

The Artificial Lift methods commonly used in wells subjected to Steam Injection Processes are: **Sucker Rod Pumping (SRP), Progressive Cavity Pumping (PCP) and Electrical Submersible Pumping (ESP).**

Currently, there are different technologies associated with these pumping systems, which can be used in high temperature and sour gas production environments with excellent results. An effective tool for design is the use of simulation software to determine the appropriate artificial lift method for vertical, inclined (slant) or horizontal wells as well as the real-time verification of the operating parameters and the forecast of optimal conditions (Downhole and Surface). **The right performance of the Artificial Lift Systems will guarantee the oil extraction in the Post-Steam Injection stage, with the consequent optimization of the Reservoir Recovery Factor.**