

## Hydraulic Pumping Unit Evaluation

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The last 10 years, the hydraulic pumping units are recognized as an alternative for wells with artificial lift systems using sucker rods pump, this technology gained more popularity compared to the previous decades, accompanied by some technological improvements in the control and with changes that simplify some operation practices and maintenance cost.

Although from the beginning Hydraulic Pumping Units were unpopular due to common leaks and high maintenance frequency, unpopularity that today remains in most cases. However, it has been observed how operators increased the use of this equipment, with the focus on applying in wells where the balance between benefits and differences with respect to known practices with traditional pumping units are justified.

Mainly for deeper and deviated wells, gas lock problems. As it is known, long strokes and operating at low velocities always are to favor the wells' production stability and reduction of failure rate on the sucker rod pump systems. Of course, considering that we must rescue the significant differences in the initial investment compared with the mechanical pumping units with long-stroke and more than 30.000 pounds structural capacity, in addition to the operational versatility and less time it takes to make adjustments to velocity and stroke length to match the desired production rates, and much less time to install and put wells in production. Some improvements in the control systems that allow not only to change the SPM from a remote system, but also the stroke length and pump spacing, thus minimizing field personnel assistance and resources allocated for such purposes.

Additionally, while we acknowledge important benefits in the way we operate the artificial lift system, it must be considered that when selecting the candidate wells for a hydraulic pumping unit, we must add the energy efficiency indicator as in any system evaluation. In the last two decades, although it is a discussion that has been going on for several years, not much has been documented about it.