

## THE CAPACITY PUMP CONTROL BY DUAL-CHANNEL ADAPTIVE SYSTEM WITH THROTTLE AND FREQUENCY CONTROL

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For decrease fluctuations of the liquid flow of various frequency, low-frequency and high-frequency, outlet buffer storage control system is proposed frequency submersible centrifugal pump with adaptive control of liquid level in the buffer tank. Because of the strict requirements for the operation of the pump pulse is applied throttle control. Having two control channels at the frequency of rotation of the motor pump and throttle position, but also adapt the settings to use PID level and adapt pulse durations control throttle actuator provides the damping fluid at the desired flow restrictions on the fluid level in the buffer tank [1, 2]. The results of mathematical modeling of the proposed system. The developed system of automatic control provides a significant reduction in the rate of rotation of the pump within acceptable limits and the number of inclusions throttle actuator without compensation of shaft run-out, which gives an indication of the possibility of a significant extension of the life of process equipment in the implementation of the proposed system.

### REFERENCES

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