- Settings in the system of accumulator, the damping hose, to increase the system flexibility[3].
- The buffer device is arranged in the hydraulic cylinder.
- Set back pressure valve, which can prevent overshoot phenomenon and impact load.

D. Prevent system flow pressure pulsation induced vibration and noise

- When design the hydraulic pump, pump module of gear try to take small, number of teeth try to take more; plunger of plunger pump a number should be an odd number, usually 7~ 9, and in the swash plate provided on symmetric triangular grooves, to prevent the plunger pump oil.
- Add energy accumulator in the system to absorb pressure pulsation and flow, because the accumulator can absorb the noise below 10Hz.
- We can connect rubber hose near the hydraulic pump oil outlet because rubber hose to absorb high frequency noise is very effective.
- Ripple reduction device tandem connected in the pipeline (pulsation damper), can eliminate the pipeline flow pulsation.

E. To prevent the pipeline and tank vibration and noise

- The length of the pipe should be as short as possible, swerved should be less curved, a circular should be transited with arc. The metal hard tube, pipe layout should be parallel to each other and to leave a gap. Select support frame interval according to the diameter size and add rubber pads or wood pad between the oil pipe and support frame to damping.
- Reinforcing tank rigid, set isolation board to control the vibration and noise of the oil tank.
- When the pump's motor, hydraulic pump and the fuel tank share the same base, should installate shock absorber under the motor base, to avoid the mechanical vibration to a tank.

F. Take the isolation and sound insulation method to control the vibration and noise of the outside path.

- Install antivibration rubber pad on the motor, hydraulic pump and the hydraulic valve installation surface.
- Cover hydraulic pump with a sound absorbing material sound insulation cover, which can effectively reduce the noise.

IV. THE END

Vibration and noise of Hydraulic hoist hydraulic system is more complex, not only the unbalanced force, inertia force, friction resistance caused by a variety of mechanical vibration and noise, but also and the pressure and flow pulsation, cavitation, hydraulic shock caused by different types of fluid vibration and noise.According to different sources, measures should be taken from the hydraulic system design, manufacturing, installation, using and to adopt a reasonable reduction and other aspects to control the vibration and noise generate and transmit to a minimum range.Vibration and noise of hydraulic system generating mechanism is similar, these measures can also be widely used in various types of hydraulic system of vibration and noise reduction.

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