Horizontal/Vertical End Suction Pump Start-Up Checklist

Project Information

Job Name: _____

Location (Address/City, State): _____

Engineer (Firm's Name): _____

Installing Contractor (Company's Name):_____

Start-Up (Company's Name): _____

Electrical Equipment Install & Setup (Company's Name): _____

Operating Manager (Person In Charge): _____

Contact Info (Email/Phone): _____

Health and Safety

Risk Assessment Methodology Reviewed (If Applicable): _____

Work Permits Issued and Reviewed (If Applicable): _____

Site Safety and Personal Protective Equipment Plans Reviewed: _____

Access and Emergency Exiting Plan Reviewed: _____

Equipment Information

Installation Date: _____

Start-Up Date: _____

Pump Model Number: _____

Pump Serial: _____

Pump Size: _____

Driver Manufacture & Serial Number: _____

Driver Type, HP, RPM: _____

Drive Manufacture & Model: _____

Drive Type and Size: _____

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Equipment Condition Checklist

☐ Yes ☐ No Check that equipment arrived in good condition?

☐ Yes ☐ No Check that all items were received?

☐ Yes ☐ No Was equipment stored for a period of time? (If Yes, Length of Storage :_____)

☐ Yes ☐ No Has equipment been protected from the elements?

☐ Yes ☐ No Was equipment subject to flooding?

☐ Yes ☐ No Where the storage instructions followed?

Installation Checklist

☐ Yes ☐ No Does the impeller turn freely by hand?

☐ Yes ☐ No Check if impeller rotates in the direction indicated on volute?

Pump must operate in the direction indicated by the arrow on the pump casing; serious damage can result if the pump is operated with incorrect rotation. Always check rotation each time the motor leads have been disconnected.

☐ Yes ☐ No Check all connections to motor and starting device with wiring diagram?

☐ Yes ☐ No Check all that Operations & Maintenance Instructions where received and reviewed?

☐ Yes ☐ No Check impeller adjustment?

☐ Yes ☐ No Check that the pump is full of liquid?

☐ Yes ☐ No Check if the unit is grouted?

☐ Yes ☐ No Check that the grout sound (free of voids and cracks)?

☐ Yes ☐ No Check if anchor bolts are tight?

☐ Yes ☐ No Check if the unit is free from piping strains and bending moments being transmitted to the pump flanges from piping?

☐ Yes ☐ No Check if the piping is properly supported?

☐ Yes ☐ No Check if piping is free of scale, dirt and foreign matters?

☐ Yes ☐ No Check and locate emergency stop locations?

☐ Yes ☐ No Check and locate gauge access locations?

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Alignment

COUPLING OR V-BELT DRIVE

- The pump and drive have been checked at the factory to determine that field alignment dimensionally can be made. It is mandatory that the unit is field aligned.
- The baseplate needs to lay flat and level on grout without stress and strain put on by anchoring.

A flexible coupling never compensates for misalignment. In all cases a coupling must be in alignment for continuous operation. Where a non-flexible coupling is used, proper alignment is indispensable to the proper functioning of pump and driver. Premature pump failure will occur without proper alignment.

ALIGNMENT PROCEDURE

- See instruction manual for the pump being aligned with coupling or v-belt drive. Coupling alignments should be made with dial indicator. Manual used: _____
  - Parallel_____T.I.R.
  - Angular_____T.I.R.

☐ Yes ☐ No Belt drive tension checked?

☐ Yes ☐ No All safety guards and labels in place?

Mechanical Seal/Stuffing Box Checklist

- If the pump is fitted with mechanical seal, bleed air from seal chamber especially in a vertical application. Make sure the chamber is full of liquid before turning on the pump.
  - Seal water pressure should be 10 to 20 psi above the discharge of the pump is recommended for **cartridge seals**. (Seal water pressure) _____PSI
  - Make sure that the oil chamber pressure never exceeds 14 psi in a **tandem mechanical** seal arrangement.
- If the pump is fitted with packing, make sure the gland is loose enough to allow the water to leak freely at the initial start, then one to two drops per second for the initial break in and then tighten gland down to no less than a minimum of 30 drips per minute. (Packing leakage) _____ Drips/minute
- Lubrication type: ☐ Internal ☐ External ☐ Grease

☐ Yes ☐ No Seal chamber/stuffing box chamber full of liquid?

☐ Yes ☐ No Seal water lines properly installed?

☐ Yes ☐ No Are all accessory items, RTD's, bearing temp detectors, vibration sensors, ect., mounted and properly installed?

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Start-Up

PRIMING

- If the pump is installed with a positive head on the suction, it can be primed by opening the suction valve and allowing the liquid to enter the casing. At the same time, open vent until all air is out of casing.
- If the pump is installed with a suction lift, priming must be done by other methods such as foot valves, ejectors or by manually filling the casing and suction line.

Pump must be completely filled with liquid before starting. Never allow pump to run dry in the hope it will prime itself. Serious damage to the pump, packing or mechanical seal may result.

STARTING

- Close drain valves and valve in discharge line.
- Open fully all valves in the suction line.
- Prime the pump.
    - If the pump does not prime properly, or loses prime during start-up, it should be shut down and the condition corrected before the procedure is repeated.
- Make sure suction valve is fully open.
- Make sure discharge vale is 25% open. (Open to 100% within 10 seconds of start-up)
- Start the pump driver.

On start-up with the discharge valve closed, pump must not be run against closed valve for more than 30 seconds.

OPERATING CHECKS

- Check the pump and piping for leaks.
- Check and record pressure gauge reading for future reference.
    - Suction_____PSIG/KPa
    - Discharge_____PSIS/KPa
- Check and record flow_____USGPM
- Check and record well level_____FEET

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- Check and record voltage, amperage per phase and kilowatts (of available).
  - Voltage_____/_____/_____Volts _____
  - Amperage_____/_____/_____Amps _____
  - Hertz _____

SHUTDOWN

- When stopping pump always close the discharge valve first if check valve is not in installed.
- Pump should never run for any length of time with both suction and discharge valves closed due to the danger of building up pressures and temperatures.

MAINTENANCE

- Have you instructed user's supervisory and maintenance personnel on the correct operation of this equipment?
- Do maintenance personnel have instruction books for these specific units?

Comments:

_____

_____

_____

_____

I certify this report to be accurate (Please Print and Sign by start-up person):

_____

Date: _____

Others present during Start-Up: _____

_____

This report is designed to insure the customer that customer service and a quality product are the number one priority.
Please answer the following questions completely and as accurately as possible. Please email this form to the sales@hidrostalpumps.com

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