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INSTALLATION AND INITIAL START-UP INSTRUCTIONS FOR CENTRIFUGAL PUMPS.

PLEASE READ CAREFULLY BEFORE START-UP - CHECK AS FOLLOWS:-

ELECTRICAL SUPPLY*;*

The supply voltage against the information on the electric motor nameplate.
The phasing of the supply is in accordance with the information plate on the motor.
Check the direction of rotation of the motor ***before*** *starting the pump. This must agree with the direction arrow indicated on the motor fan cowl.*

START-UP*;*

The pump must be thoroughly primed with liquor before starting. The PTFE mechanical seals should ***not*** *be test run with water as this does not "wet" the PTFE material sufficiently for good lubrication and a small ammount of proprietry wetting agent should be used in the pumped liquid if water tests are envisaged.*
These seals are designed to operate with Acidic solutions.

The ' KSI Series" Horizontal End Suction Long Coupled Pump unit is ***not*** *inherently self-priming – although the unit should be started with the discharge valve closed it should not be operated against a 'shut valve' or with no flow through the pump for a period exceeding a few minutes.*

LONG TERM STORAGE;

The pump unit should be stored in a dry vibration free location and the shaft rotated approx 1/4 to 1/2 revolution by hand at least weekly. Special Instructions are available for long term electric motor storage.

FAILURE TO PUMP.

In the unlikely event of the pump failing to pump correctly the following points should be checked:-

(1) Air leaks into the suction pipework.

(2) Air lock in the pump casing due to incorrect priming.

(3) Suction pipework may be blocked with solid material.

(4) Pump speed possibly incorrect due to faulty electrical connection.

ROUTINE CHECKS DURING NORMAL RUNNING.

(1) Excessive noise or vibration.

(2) Electric Motor Current

(3) Electric Motor Bearing temperature.

GENERAL POINTS TO NOTE ON INITIAL INSTALLATION.

(1) Pipework should not allow air pockets to form in the suction pipework.

(2) To ensure a smooth liquor flow into the pump the number of bends, valves, and other obstructions, etc. should be kept to a minimum. Suction pipework should be equal to ***or preferably one pipe size larger*** *than that of the pump suction diameter. Valves should be of the ' Free-Flow ' type ie Ball or Butterfly to reduce pipe friction losses.*

(3) There must be no excessive 'springing' of the connecting pipework as this causes excess mechanical loading on the pump casing. Pipework must be amply and correctly supported.

(4) It is good practice to install a control valve close to the pump on the discharge side to allow for delivery control adjustments. Control of the pump flow should ***not*** *be effected by a valve in the suction pipework.*

(5) The metal pumps should have CNAF jointing gasket material 1-2mm thick between the pump branches and connecting pipework. The joint material must be compatible with the pumped fluid.

(6) The pump branch flanges, clamp bolts etc should be tightened ***not exceeding the maximum*** *recommended torque figures given in the maintenance instructions.*