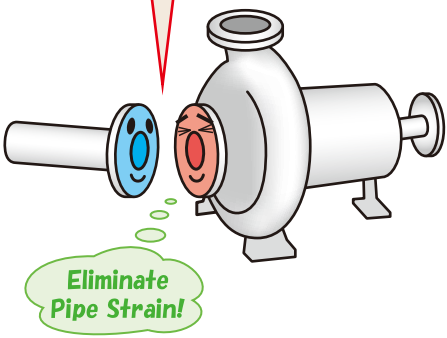
Pump Operating Precautions

5 Important Key Points

＜Precaution①＞

Avoid connecting pump flanges to displaced, misaligned or incorrect piping



Reason

Connection to displaced, incorrect or abnormal piping causes casing distortion which results in the following defects:

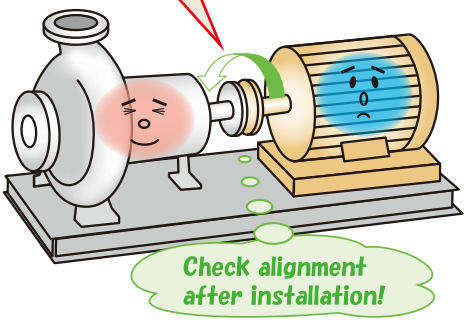
1) Leakage from casing cracks or flanges
2) Contact between internal components causing damage and abnormal noise
3) Overheating and abnormal noise in bearings
4) Aging causing pump misalignment

Action

1) Re-install/adjust piping accordingly or install flexible expansion joints to suction or discharge flanges.
2) Provide adequate support to piping to eliminate nozzle loading on the pump.

＜Precaution②＞

Align the pump and motor prior to operation



Reason

All pump sets are aligned prior to shipment, however;

1) The base plate can distort when being installed to the foundation.
2) Nozzle loading causes pump distortion.

Alignment is affected by installation conditions.

Action

After piping connection, make sure to re-align the pump and motor.

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<Precaution③>
Avoid dry running!

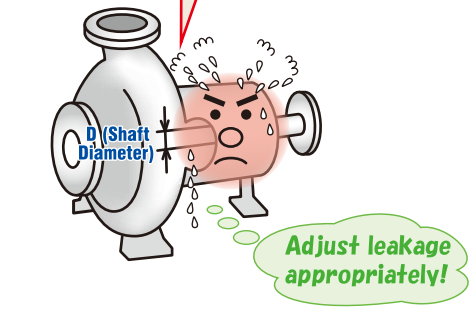
Reason

Dry running causes severe damage to the shaft seal (gland packing or mechanical seal).

Action

Check rotational direction and complete priming the pump with liquid prior to operating the pump.

<Precaution④>
Avoid zero leakage from the seal gland!



Reason

Gland packing generates heat which will result in excessive wear and reduced seal life if inadequately lubricated.

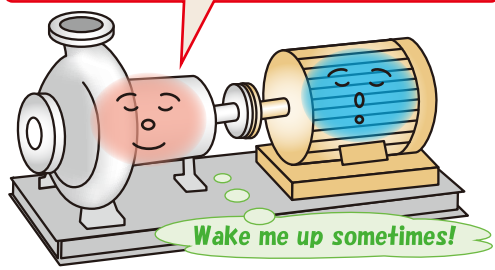
Action

1) Adjust the gland to a recommended stream leakage rate of D cc/min at the beginning of operation.

2) Adjust the gland to a recommended drip leakage rate of D/3 cc/min at normal running operation

Ref.) D indicates Shaft Diameter (mm) .
Ex.) In case of ϕ60mm diameter, :
60cc/min at the beginning of operation,
20cc/min at the normal running operation

<Precaution⑤>
Avoid not running the pump for long periods!



Reason

1) Corrosion inside the pump may cause rotating components to seize.

2) Dew condensation may cause bearings to corrode and seize.

Action

Turn the shaft manually once every two weeks or operate the pump regularly.