



MANAGEMENT SYSTEM MANUAL

KNR 7.5.5 KNORR DISTILLATION PLANT OPERATION

Originator:

Theophilus Moniz III

Approved By:

Joe Coburn

1. Purpose

The purpose of this procedure is to set forth the guidelines for the operation the distillation plant operation as required in the ISM system.

2. Responsibility

It is the responsibility of the Chief Engineer to maintain guidelines for operating the distillation plant operation.

3. General

This procedure is to be used for start up and securing the Maxim HJ50 distillation plant and the reverse osmosis distiller.

To start up Maxim HJ50

- Line up the heat source, (Electric Boiler, Oil Fired Boiler or Main Engine Heat Exchangers)
- Turn on hot water circulation pump
- Line up the potable water tank you wish to fill from the evaporator
- Turn on ultra-violet light and allow to warm up for 5 minutes
- Open overboard salt water discharge valve
- Make sure the evaporator shell drain valve is closed and the chemical tank is full
- Open the salt water feed valve slowly and adjust chemical feed to 1000 CC/MIN
- When hot water circulation temperature is 160 degrees. F, open Hot Water Outlet Valve from evaporator and open hot water feed valve slowly
- When boiling action in the evaporator shell is in a controlled state, fresh water will be collecting in the distillate tray
- Start distillate pump and open fresh water discharge valve
- Turn on Salinity Meter

To shut down Maxim HJ50

- Shut down distillate pump and secure the salinity meter
- Secure the hot water circulation pump, supply and discharge valves
- Secure the chemical tank and open the vacuum breaker valve.
- Allow salt water to flow through the shell for 15-20 minutes to cool unit.
- Secure salt water supply and overboard valves.
- Turn the ultra-violet light off and secure potable water tank valves
- Open the shell drain valve and flush unit with hot fresh water.
- Close the shell drain valve and leave shell filled with fresh water, covering lower tube bundle.



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To Start Up the Reverse Osmosis Distiller

- Line up the potable water tank that is to be filled
- Insure that the water monitor's switch is in the "ON" position
- Check the high pressure (HP) pump's oil level
- Open the overboard salt water discharge valve
- Check that the Hp pump's bypass valve is open
- Slowly open the salt water feed valve
- Open the bleed valve for the Micron housing
- Turn on the ultra-violet light and let it warm up for 5 minutes
- Start the RO unit with the system start switch, keep it depressed until the pressure activated switch takes over
- Check the unit for leaks and slowly close the HP bypass valve fully clockwise until the gauge reads 800 psi,
- Continue to check for leaks
- Check the salinity meter, it should clear (green light) in 2 to 3 minutes

To Secure the Reverse Osmosis Distiller

- Depress the Stop switch on the front of the unit
- Open the HP valve.
- Secure the salt water feed and discharge overboard valves
- Secure the potable water valve