

## **NON CONDENSIBLE GAS PURGING**

**Aim:** To purge non condensable gas from the refrigeration system.

**Apparatus:** Hand lever, wrench, water, bucket etc.

**Working principle:** Non condensable gases like air, chlorine, oil and water vapors and combinations of oxygen, hydrogen and nitrogen, collect within the refrigerating system. The non condensable gas remaining or generated in the system does not condense and cause bad influence on the efficiency of the system. The non condensable gas may enter through shaft seal, from outside when the compressor is stopped for repair, from inside when refrigerant contains some foreign matters or when refrigerant and oil are decomposed. The non condensable gas purging works on the principle of purging of non condensable gases which have already entered into the refrigeration system.

### **Procedure:**

- Feed the liquid to the evaporator coil by opening the relieve valve No.1.
- Wait for 15 minutes, open partially the by-pass valve No.2.
- Allow the liquid to flow through the inner coils of the purger drum for 1 minute.
- Close the bypass valve No.2
- Open the hot gas valve No.3 (crack open) for 1 minute.
- Close the hot gas valve No.3.
- Open the valve No.4 to release the non condensable gas accumulated inside the purger drum to the bucket filled with water.
- Wait until the big bubbles disappear in the water bucket
- Close the valve No.4.
- Open the valve no.3; and 5 simultaneously (crack open) for 1 minute to drain the liquid collected in the drum to the receiver.
- Close the valve No.3 and 5.